UNCRATING/INSTALLATION INSTRUCTIONS

BASIL® 9500 Cage and Rack Washer

(05/23/02)   **P-122998-049**
Rev. 4

A WORD FROM STERIS CORPORATION

Follow each step of the *uncrating/installation instructions* **in the order presented**. To avoid equipment damage, carefully open the carton. If you find any indication equipment damage (no matter how slight), show it to your supervisor.

To properly install this unit, you will need the Equipment Drawings (previously furnished), showing all utility service and space requirements. If drawings cannot be located, replacement copies may be obtained by writing, faxing or telephoning STERIS giving the serial and model numbers of your equipment.

Once installed, equipment operation should be tested by a qualified service technician (as outlined in Section 5) prior to equipment usage.

If STERIS supervision is desired, for installing and starting up this equipment, contact your local STERIS representative.

Indications for Use

The Basil® 9500 Cage and Rack Washer is intended for use in the sanitation of soiled, reusable animal care devices (such as cages, racks, debris pans, feeder bottles) and other miscellaneous items by providing thorough cleaning and optimal drying. Safety hazards may occur if unit is used for other purposes than stated above.

Advisory

A listing of safety precautions to be observed when uncrating, installing, and testing this equipment can be found in Section 1 of these instructions. Do not begin uncrating/installing this equipment until you have become familiar with this information.

Any alteration of the washer not authorized or performed by STERIS Engineering Service which could affect its operation will void the warranty, could adversely affect washing efficacy, could violate national, state and local regulations, and could jeopardize your insurance coverage.

IMPORTANT: Check local occupational health and safety regulations, as well as electric and plumbing codes, for any special requirements that may pertain to installation of this unit.

Printed in Canada.

Service Information

A thorough preventive maintenance program is essential to safe and proper equipment operation. You are encouraged to contact your STERIS representative concerning extended service maintenance agreements to give your washer planned maintenance, assuring equipment performance according to factory specifications. A global network of skilled service specialists can provide periodic inspections and adjustments to assure low-cost peak performance. STERIS representatives can provide information regarding Annual Maintenance Agreements.

STERIS carries a complete line of accessories for use in this equipment. A STERIS representative will gladly review these with you.

See inside back cover for contact information.

Certification

$C\epsilon$

This Basil 9500 Cage and Rack Washer complies with the following standards:

- **American and Canadian Standards:**
  Conform to ANSI/UL Std. 3101-1 conform to CAN/CSA Std. C22.2 1010.1

- **Governing Directive for the Affixing of the CE Mark:**
  Machinery Directive (98/37/CE).

- **Conformity to Other Applicable Directives:**
  Electromagnetic Compatibility Directive (89/336/EEC) and amendments (92/31/EEC, 93/68/EEC); Low Voltage Directive (73/23/EED) and amendment (93/68/EC).

- **Standards applied to demonstrate conformity to the directives:**
  IEC 1010-1 (1990); A1 (1992) A2 (1995); EN 50081-2; EN 55011; CISPR 11; EN 50082-2; EN 61000-4-2; EN 61000-4-3/ENV 50140; ENV 50204; EN 61000-4-4; EN 61000-4-6/ENV 50141.

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LISTING OF WARNINGS, CAUTIONS, AND SYMBOLS

The following is a listing of the safety precautions which must be observed when uncrating, installing and servicing this equipment. WARNINGS indicate the potential for danger to personnel, and CAUTIONS indicate the potential for damage to equipment. These precautions are repeated (in whole or in part), where applicable, throughout the manual.

WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:

⚠️ **When moving the unit,** use a forklift.

⚠️ **Only fully qualified service personnel should assemble and/or make adjustments to this equipment.** Assembly or adjustments done by inexperienced, unqualified personnel could cause personal injury or result in costly damage. Contact your STERIS sales or service representative regarding service options.

⚠️ **Do not remove protective paper covering from front of doors until door installation is complete.** Paper secures exterior glass in place during transport and installation.

⚠️ **To test or demonstrate Emergency Exit Safety Doors,** first press Emergency Stop Pushbutton (located under control) or Emergency Safety Guard Rails (inside wash chamber) to turn power OFF. If power is still on while adjusting or servicing doors, the Photoelectric Sensor will detect the movement of the door panels and doors will open automatically.

⚠️ **Do not assemble Drying System components (frame, fan and heat exchanger) prior to installation on the mechanical core.** Lifting assembled Drying System may result in back injury or equipment damage.

WARNING – LACERATION/EYE INJURY HAZARD:

⚠️ **When removing bands,** wear gloves and eye protection, and always use a tool specifically designed to cut the bands. The bands used to secure these crates can cause personal injury when cut and tension is released.

WARNING – LACERATION HAZARD:

⚠️ **When removing bolts,** wear gloves to protect your hands.

WARNING – PERSONAL INJURY HAZARD:

⚠️ **Doors are heavy.** Installation of doors requires two people.

⚠️ **When doors are closing** a pinch point is created at the hinges. Keep fingers away from door hinges to prevent pinching.

⚠️ **Keep hands/fingers away from closing doors** to prevent crushing between the two doors.

⚠️ **To open doors from inside wash chamber,** press Emergency Safety Guard Rails. Washer operation will automatically stop. Then push firmly between door panels using shoulder and upper arm, applying upper body force. Do not push between the doors, but between door panels.

⚠️ **Two people are required to install the roof end sections.** Using a step ladder, first set roof end on temporary roof end support brackets, then lift up and sit into position.

(See next page for additional warnings and cautions)

WARNING – BURN HAZARD:

⚠️ Except for emergency, do not open doors when cycle is in progress. In an emergency, first stop cycle by pressing the Emergency Stop pushbutton and wait for water flow to stop. Wear appropriate personal protective equipment (PPE) whenever reaching into or entering wash chamber.

⚠️ **Allow unit to cool down** before performing any service on pump. Surface of motor and piping become very hot during unit operation.

⚠️ **Allow unit to cool down** before performing any service on mechanical components and on piping. Components and piping become very hot during unit operation.

⚠️ **Allow piping to cool down** before inspecting and/or cleaning supply line strainers.

⚠️ **When inspecting and/or cleaning supply line strainers,** hot water/steam may be sprayed through door opening. Wear appropriate Personal Protective Equipment (PPE).

⚠️ **Inner surfaces of washer are very hot after cycle completion.** Operator should wear appropriate Personal Protective Equipment (PPE) and avoid all contact with inner surfaces when entering wash chamber to unload washer.

WARNING – FALL HAZARD:

⚠️ **To prevent falls,** keep floors dry. Promptly clean up any spills or drippage.

WARNING – ELECTRICAL SHOCK AND/OR BURN HAZARD:

⚠️ **Fasteners and star washers** are used to ensure protective bonding continuity. Always reinstall any star washer which may have been removed during installation or servicing.

WARNING – CHEMICAL BURN/EYE INJURY HAZARD:

⚠️ **Washer chemicals are caustic** and can cause adverse effects to exposed tissues. Do not get in eyes, on skin, or attempt to ingest by mouth.

- Read and follow the precautions and instructions on the chemical label and in the Material Safety Data Sheet (MSDS) prior to handling the chemical, refilling the chemical containers, or servicing the chemical injection pumps and lines.

- Refer to MSDS for appropriate Personal Protective Equipment (PPE) whenever handling chemicals or servicing chemical injection pump and lines.

CAUTION – POSSIBLE EQUIPMENT DAMAGE:

⚠️ After utilities are connected to washer, slowly remove the protective adhesive paper from the exterior cabinet panels to reduce the risk of static discharge.

⚠️ When removing adhesives from stainless steel, use a small amount of non-flammable cleaning solvent. Rub in a back-and-forth motion (in same direction as surface grain). Solvent rubbed in a circular motion or applied with a wire brush or steel wool on door and chamber assemblies can be harmful to stainless steel. Do not use solvents on painted surfaces.

⚠️ Once three-phase power is connected, check pump for correct rotation (indicated by arrow on pump motor). Incorrect pump rotation may result in pump damage and improper cleaning action.

CAUTION – POSSIBLE EQUIPMENT DAMAGE (cont'd):
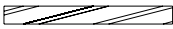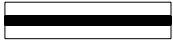
⚠ Always position Bottle Washing Cart (option) over the manifolded coupling system before operating unit. If manifold is not positioned correctly, damage may result and unit will be unable to effectively wash load.

⚠ Always position Central Header Manifold (option) over the manifolded coupling system before operating unit. If manifold is not positioned correctly, damage may result and unit will be unable to effectively wash load.

⚠ Always leave plenty of space between load and doors. Leaning load against doors will damage doors and also prevent doors from opening.

⚠ Handle pH Probe with care: pH Probe is fragile. Hitting or rubbing pH probe may damage probe sensor.

⚠ Use clamps to tighten quick disconnect clamps. Pump damage may result if air passes through union.

⚠ Do not remove adhesive tape from corner spring traps before installation of doors is completed.

⚠ Before operating equipment, make sure that pump motor is rotating in proper direction.

⚠ Before removing plugs on Air/Oil tanks, make sure doors are in closed position and all door outputs are de-activated.

IMPORTANT: Check the local occupational health and safety regulations, as well as electric and plumbing codes, for any special requirements that may pertain to installation of this unit.

Symbols

Symbols on the Crate:	
Symbol	**Definition**
WARNING (TIP 'N TELL Indicator symbol)	TIP 'N TELL Indicator. "If TIP 'N TELL arrow point is blue, this package has been on its side or tipped over in transit. Make note on the bill of lading and check for damage. Any claims for dripping on this notation.
85% max	Maximum Relative Humidity.
↑	This Side Up.
(umbrella symbol)	Keep Dry.
(glass symbol)	Fragile.
(do not stack symbol)	Do Not Stack.
55°C 131°F	Maximum Temperature.
(open this side symbol)	Open This Side.
Symbols on the Unit:	
Symbol	**Definition**
(hot surface symbol)	Transfer of Heat, Hot Surface.
(ground symbol)	Protective Earth (Ground).
(electrical shock symbol)	Warning! Risk of Electrical Shock.
(attention symbol)	Attention, Consult Manual for Further Instructions.
(do not step symbol)	Warning! Do Not Step Here.
(fork lift symbol)	Fork Lift: Place Forks of the Fork Lift Here.

Symbols (cont'd)

Symbols on the Unit (cont'd):	
Symbol	**Definition**
	Safety Exit: Push Here in Case of Emergency.
	Rotation: Direction of the Rotation Device.
	Emergency Stop Guard Rails: Push to Stop Washer and De-energize Control.
	Load Delimitation: Do not Place Load Over Marks.
PRESET AT FACTORY	Factory Adjustment: Do Not Adjust.

Information on the Nameplate:	
Symbol	**Definition**
MOD.	Model Number of the Unit
SER.	Serial Number of the Unit
kW	Power Rating of the Unit.
VOLTS	Voltage Rating of the Unit.
AMPS	Amperage Rating of the Unit.
PH/Hz	Phase/Hertz — Frequency of the Unit.
YEAR	Year of Manufacturing of the Unit.

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2.1 Before Installing Equipment
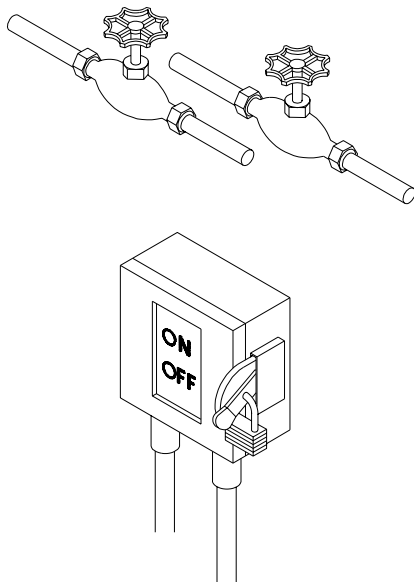
Figure 2-1. Utility Service Connections

1. Review permissible environmental conditions: This washer is designed to give optimal results in an environment where maximum relative humidity is less than 85% and maximum operating temperature is 104°F (40°C).

2. An optional seismic anchorage system is available for high risk seismic zones.

3. Review installation requirements:

   a. Clearance - Clearance space shown on Equipment Drawing is necessary for easy installation and proper operation and maintenance of washer (see Equipment Drawing 122998-061).

   b. Barrier wall flange(s) installation - Refer to Equipment Drawing 122998-061 for installation.

   c. Utility service lines:

      • To allow service on unit without shutting off building supply lines, shutoff valves (not by STERIS) should be installed on steam, air and water lines to unit (see Figure 2-1). Shutoff valves must be capable of being locked in OFF position only.

      • Disconnect switch (not by STERIS) must be installed on electric supply line (see Figure 2-1).

      • Disconnect switches must be marked as the disconnecting device for the equipment and must be capable of being locked in OFF position only.

      • If machine is installed next to other equipment, shutoff valves and disconnect switches should be located so that service can be shut off to one piece of equipment at a time.

      • The disconnect device of the equipment must be within easy reach of the operator (preferably no more than 3 feet [1 m] away from equipment).

      • Utility service requirements are shown on Equipment Drawing.

   d. Electricity:

      • Unit requires either 208 V, 60 Hz, 3-phase, 3-wire; 380/400/415 V, 50 Hz, 3-phase, 3-wire; or 480 V, 60 Hz, 3-phase, 3-wire power.

        For 208 V, 60 Hz, a 50 A disconnect switch and AWG #6 (16 mm) wire is recommended.

        For 480 V, 60 Hz, a 30 A disconnect switch and AWG #10 (6 mm) wire is recommended.

        For 380/400/415 V, 50 Hz, a 20 A disconnect switch and AWG #12 (4 mm^2) wire is recommended.

        If electrical supply is 380 V or 400 V, locate the 1000 VA transformer, inside the main electrical box, and connect red wire of primary side to 380 V (H2) tap connection.

- Check Equipment Drawing or Identification nameplate (located on frame of mobile mechanical core, above main electrical box, (see Figure 3-2) for proper voltage and amperage.

- This unit is overvoltage (Installation Category II).

- This equipment is not intended to be connected close to the main supply of the building.

- This equipment needs to be installed according to local electrical codes.

4. **This is a Class 1 equipment**

A protective conductor connection is essential for the safe operation of the equipment. Check for presence of protective conductor at equipment terminal and verify if connection is well secured inside terminal with proper torque requirement.

- Torque requirement for supply conductor terminals:
  (L1-L2-L3): 0.89 -1.03 lb/ft (1,2 - 1,4 N•m)

- Protective conductor terminal:
  16.96 - 29.50 lb/ft (23 - 40 N•m)

5. Make sure washer is placed, as shown on Equipment Drawing, in correct relation to building supply lines. If unit is not at installation site, refer to Section 3 for proper moving instructions.

6. If washer is pit-mounted:

- Pit must be clean.

- Pit drain piping should be level with pit floor to allow water to drain.

3.1 Open Crates

NOTE: Use a forklift to move crates.

NOTE: Uncrate on level floor as close to installation site as possible.

IMPORTANT: Bring in and uncrate only one crate at a time (see Figure 3-1).

3.1.1 Assembled Unit

A fully equipped, assembled unit should consist of two or more crates:

- **Crate A**: Sump, floor, roof, non-service side panels, hardware box, control panel(s), doors;
  Dimensions: 89" W x 117" H x 109" L (2260 x 2972 x 2769 mm);
  Max. Weight: 4000 lb (1818 kg).

- **Crate C**: Mechanical core;
  Dimensions: 49" W x 85" H x 108" L (1245 x 2159 x 2743 mm);
  Max. Weight: 2000 lb (909 kg).

- **Crate D**: Drying package (option) and/or enclosure wall option and/or ramp (option):
  Dimensions: 48" W x 44" H x 60" L (1229 x 1118 x 1524 mm).
  Max. weight: 550 lb (250 kg).

NOTE: There is no Crate B for assembled units.

⚠ **WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: When moving the unit, use a forklift.**

⚠ **WARNING – LACERATION/ EYE INJURY HAZARD: When removing bands, wear gloves and eye protection, and always use a tool specifically designed to cut the bands. The bands used to secure these crates can cause personal injury when cut and tension is released.**

1. Bring washer as close as possible to installation site.

2. Position unit to open wooden crate from top and side. Provide a clear work area on all sides.

3. Remove transparent plastic wrap from around crate.

4. Check Tip Indicator, located on upper left side of crates (see Figure 1). Tip Indicator contains a blue compound at the bottom of the indicator. If unit has been tipped, residue from the blue compound will be found higher up in the indicator. If unit has been tipped, notify your STERIS regional office. A service technician will review the equipment and determine if unit was damaged.

5. Remove wood panels from top and sides of washer.

6. With skid under washer, lift and bring washer close to installation site.

7. Lift washer and remove skid from under washer.

8. Place washer into pit at final installation site. See Equipment Drawing (122-998-061) and seismic anchorage report if option applies (122-997-987) for proper installation.

IMPORTANT: Be sure that suction piping is located on service side.

9. Floor mounted units:

   - Use a 24" spirit level, level sump, end-to-end and side-to-side, to adjust the four leveling legs (one at each corner of sump).

   - Distance from door sill and floor can be adjusted between 7" and 9" (18 cm to 23 cm).

   - Make sure washer is flush with floor.

Drying Option

Mechanical Core

Basil 9500 Cage and Rack Washer

D

C

STERIS

D

B

STERIS

C

A

STERIS

B

STERIS

A

Tip Indicators

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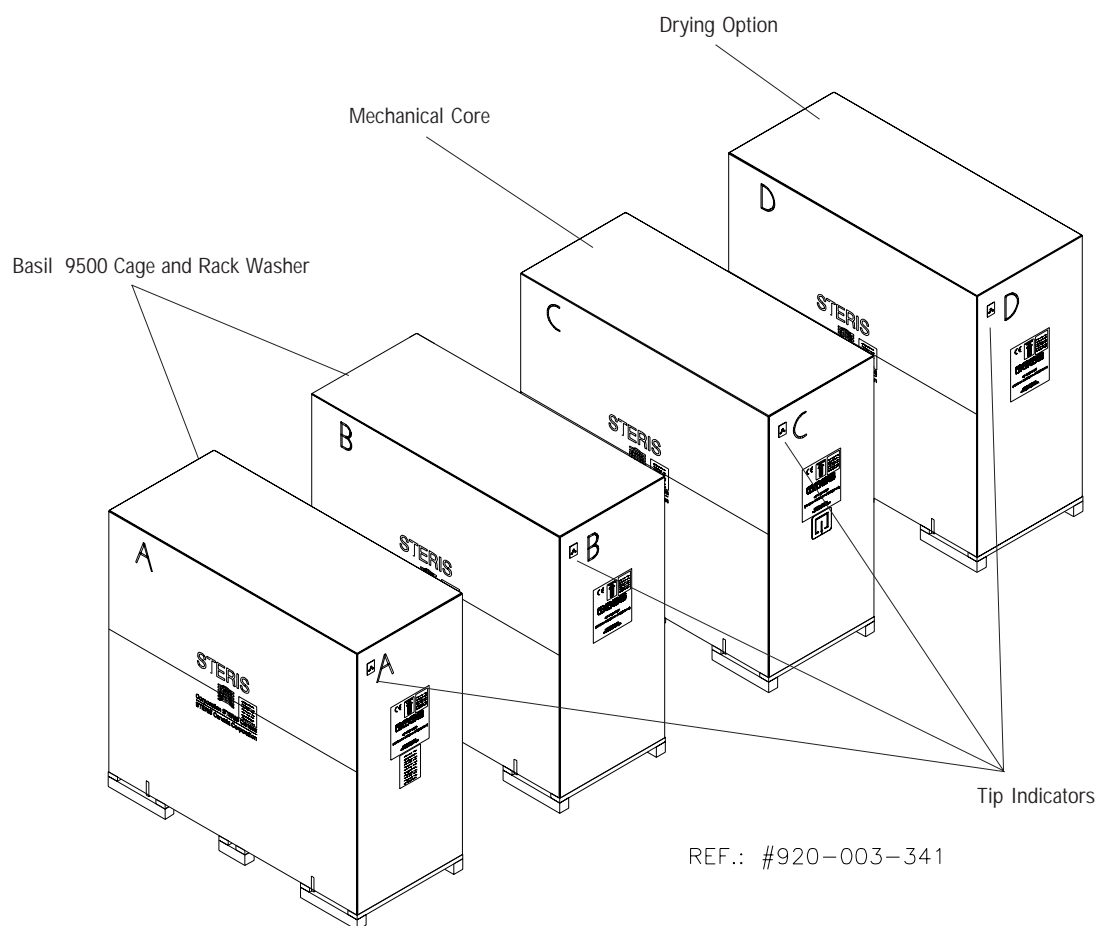
Figure 3-1. Crates

10. Pit-mounted units:

- Use a 24″ spirit level, level sump, end-to-end and side-to-side, to adjust four leveling legs (one at each corner of sump).

- To access leveling legs, external cabinet corners and front service panels may have to be removed:

  a) Remove screws holding front service panel in place, and remove panel.

  b) Remove screws holding non-control side external cabinet c o r n e r panel   in place and remove panel.

NOTE: leveling legs on control side panels can be reached from behind control side panel without having to be removed.

11. Inside wash chamber: Cut bands and remove control(s) from bottom of wash chamber.

12. Install controls on service side cabinet corner (5, 7) using hardware provided on controls (97, 98), tighten all hardware (see Figure 3-4).

NOTE: Always verify with customer if the location of main control with printer corresponds to configuration required.

NOTE: Control Configuration. If controls have been changed from one end to the other, align control with control door window as follows:

1. Close locks on control door.

2. Place control next to transparent membrane as if to operate control touch pad.

3. Align control with control door window.

4. Tighten nuts.

5. Use Blank Sticker to cover printer window on secondary control side (see Figure 3-14, detail "A").

   - Remove bolts holding pieces of wood securing spray headers in place.

   - Remove bolts and remove wooden floor frame inside wash chamber.

   - Remove pieces of wood securing doors in place.

Once unit is in place, see Section 3.2.25 (Crate C) and Section 3.3.5 (Crate D) to complete washer installation.

Non-Service Side

Right Side

Mechanical Core

Left Side

Tip Indicators

Emergency Stop Pushbutton

Service Side

Ref.: 920-003-135

Nameplate
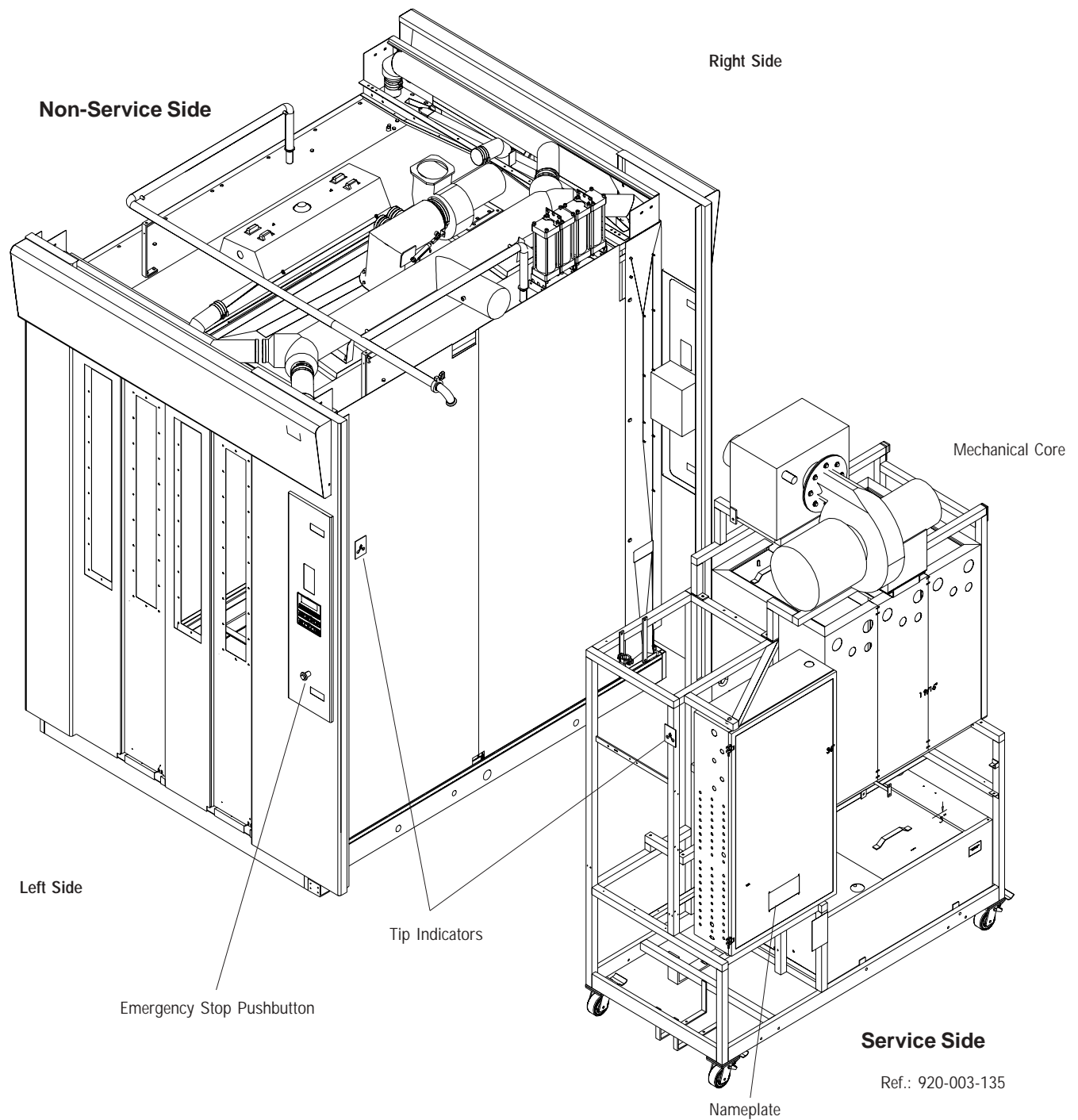
Figure 3-2. Basil® 9500 Cage and Rack Washer, Reference View Point for All Installation Locations

3.1.2 Disassembled Unit

A fully equipped, disassembled unit should consist of four crates:

- **Crate A**: Sump, floor, roof, non-service side panels, hardware box;
  Dimensions: 49" W x 85" H x 108" L x (1245 x 2159 x 22743 mm);
  Max. weight: 2000 lb (909 kg).

- **Crate B**: End roof, piping, guards, doors;
  Dimensions: 49" W x 85" H x 108" L x (1245 x 2159 x 22743 mm);
  Max. weight: 2000 lb (909 kg);
  If option side panel add 200 lb (91 kg).

- **Crate C**: Mechanical core;
  Dimensions: 49" W x 85" H x 108" L x (1245 x 2159 x 22743 mm);
  Max. weight: 2000 lb (909 kg).

- **Crate D**: Drying package (option);
  Dimensions: 48" W x 44" H x 60" L x (1229 x 1118 x 1524 mm);
  Weight: 550 lb (250 kg);
  and/or enclosure wall option, Weight: 700 lb (317 kg);
  and/or ramp (option);
  Weight: 550 lb (250 kg).

⚠ **WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: When moving the unit, use a forklift.**

⚠ **WARNING – LACERATION/EYE INJURY HAZARD: When removing bands, wear gloves and eye protection, and always use a tool specifically designed to cut the bands. The bands used to secure these crates can cause personal injury when cut and tension is released.**

1. Remove transparent plastic wrap from around crate.

2. Check Tip Indicator, located on upper left side of crates (see Figure 3-1). Tip indicator contains a blue compound at the bottom of the indicator. If unit has been tipped, residue from the blue compound will be found higher up in the indicator. If unit has been tipped, notify your STERIS regional office. A service technician will review the equipment and determine if unit was damaged.

3. Position wooden crate to enable opening from top and side. Provide a clear work area on all sides.

4. Remove and discard side wooden panels.

IMPORTANT: Do not remove wooden top and side crate frames. All parts must be removed from crate ends. Do not remove parts from top of crates.

NOTE: Do not remove white protective adhesive paper until after utilities are connected.

5. Mobile mechanical core:

   - Check Tip Indicator, located on frame below main electrical box (see Figure 3-2). If unit has been tipped, notify your STERIS regional office. A service technician will review the equipment and determine if unit was damaged.

6. Repeat steps 1 through 3 for each crate.

IMPORTANT: Become familiar with components and installation instructions before installing washer. (see Fig. 3-2).

1" [25 mm] Min. Clearance

3" [77 mm] Min. Clearance

6" [152 mm] Min.

Suction Piping

94" [2,39 m] Pit

92" [2,34 m] Washer

Mechanical Core

1" [25 mm] Min.

68-3/4" [1,75 m] Washer

78" [1,98 m] Pit

Mechanical Core

Washer Outline

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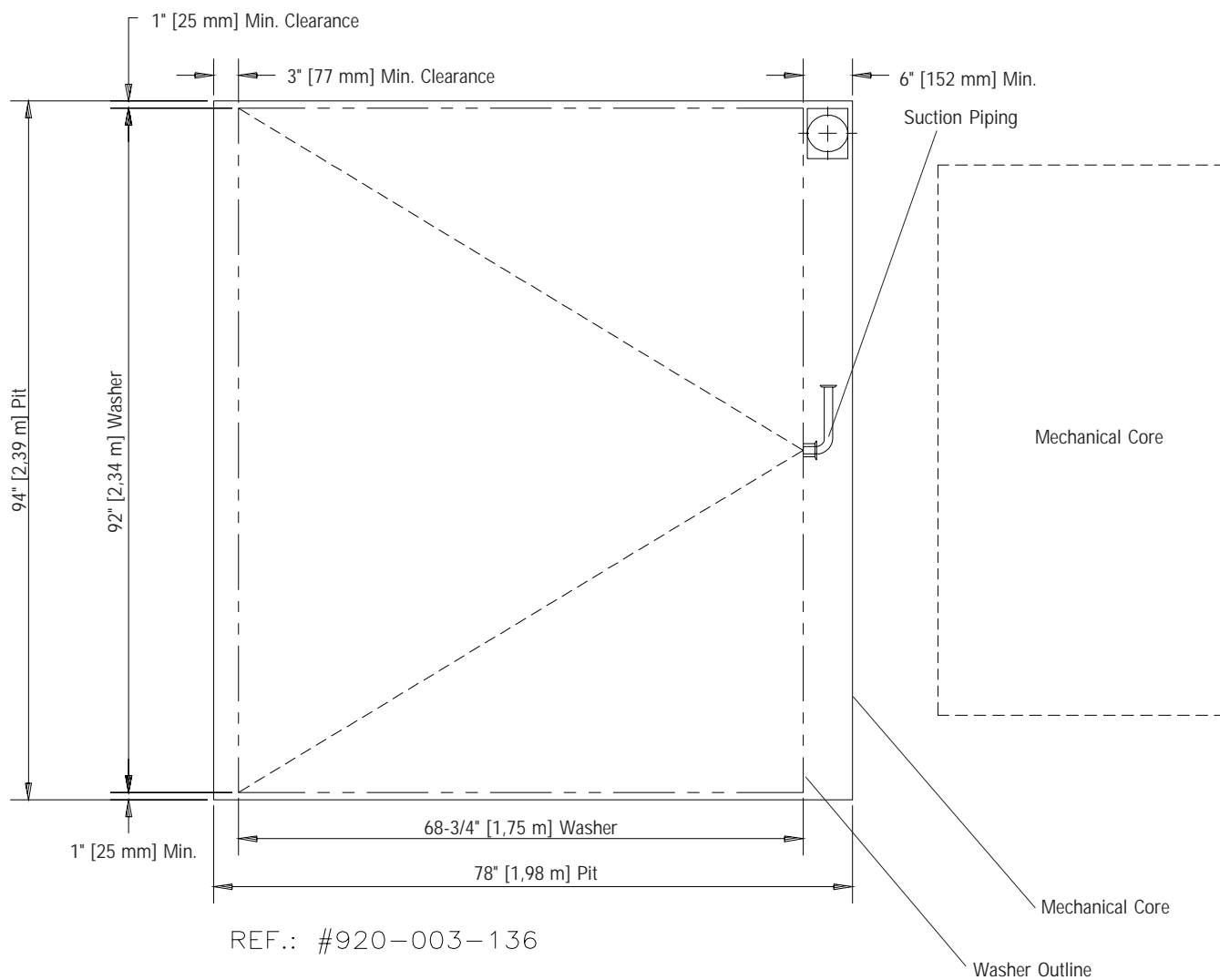
Figure 3-3. Pit Mounted Unit

3.2 Disassembled Unit Assembly

IMPORTANT: Uncrate and assemble only one crate at a time.

NOTE: Major components in crate are numbred to assist in inventory and assembly of unit. Review crate contents by matching numbers on components to numbers listed in parenthesis ( ) and on figures.

NOTE: Bolts, washers, nuts, and other items needed for the assembly of the unit are in a box labeled HARDWARE, inside Crate A.

3.2.1 Crate A

Contents:

- Sump, without floor and floor grating assembly (1).
- Cabinet corner panels, non-service side, left (2) and right (4).
- Cabinet corner panels, service side, left (7) and right (5).
- Roof mounting brackets (9).
- Non service side roof (10) and service side roof (11).
- Floor frame (31).
- Floor grating sections: 1 central section (32) 2 side sections (33).
- Main Control (97).
- Remote Control (98).
- Cabinet supports (99).
- Hardware Installation Kit: bolts, silicon, etc.

3.2.2 Sump

Figure 3-3

1. See Equipment Drawing (122998-061) and seismic anchorage report if option applies, (122997-987) for complete installation details.

NOTE: For seismic installation, refer to Seismic Anchorage Instructions (included with documentation).

2. Install sump (1) on floor or in pit (if pit-mounted unit).

IMPORTANT: Be sure that suction piping is located on service side.

3. Floor mounted units:

   - Use a 24″ spirit level, level sump, end-to-end and side-to-side, to adjust four leveling legs (one at each corner of sump).
   - Distance from door sill and floor can be adjusted between 7 and 9 inches (18 cm to 23 cm).

4. Pit-mounted units:

   - Make sure that no floor covering materials, such as tile or wood, will be installed after unit is into pit. If a floor covering is required, make sure unit is flush with floor covering.
   - Use a 24″ spirit level, level sump, end-to-end and side-to-side, to adjust four leveling legs (one at each corner of sump).
   - Make sure washer is flush with floor.

5. Floor Gratings:
   a) Install floor frame (31) inserting pins in holes (non-service side).
   b) Install floor gratings (center (32), sides (33)) on floor frame.

⚠ **WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: When moving the unit, use a forklift.**

⚠ **WARNING – LACERATION HAZARD: When removing bolts, wear gloves to potect your hands.**

Apply Silicone

Apply Silicone

Detail C

②

④

①

Wall

Angle Bracket

REF.: #920-003-137

Detail B

Detail A
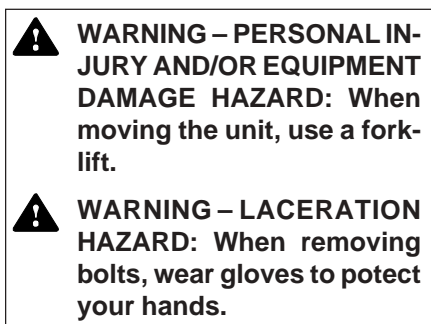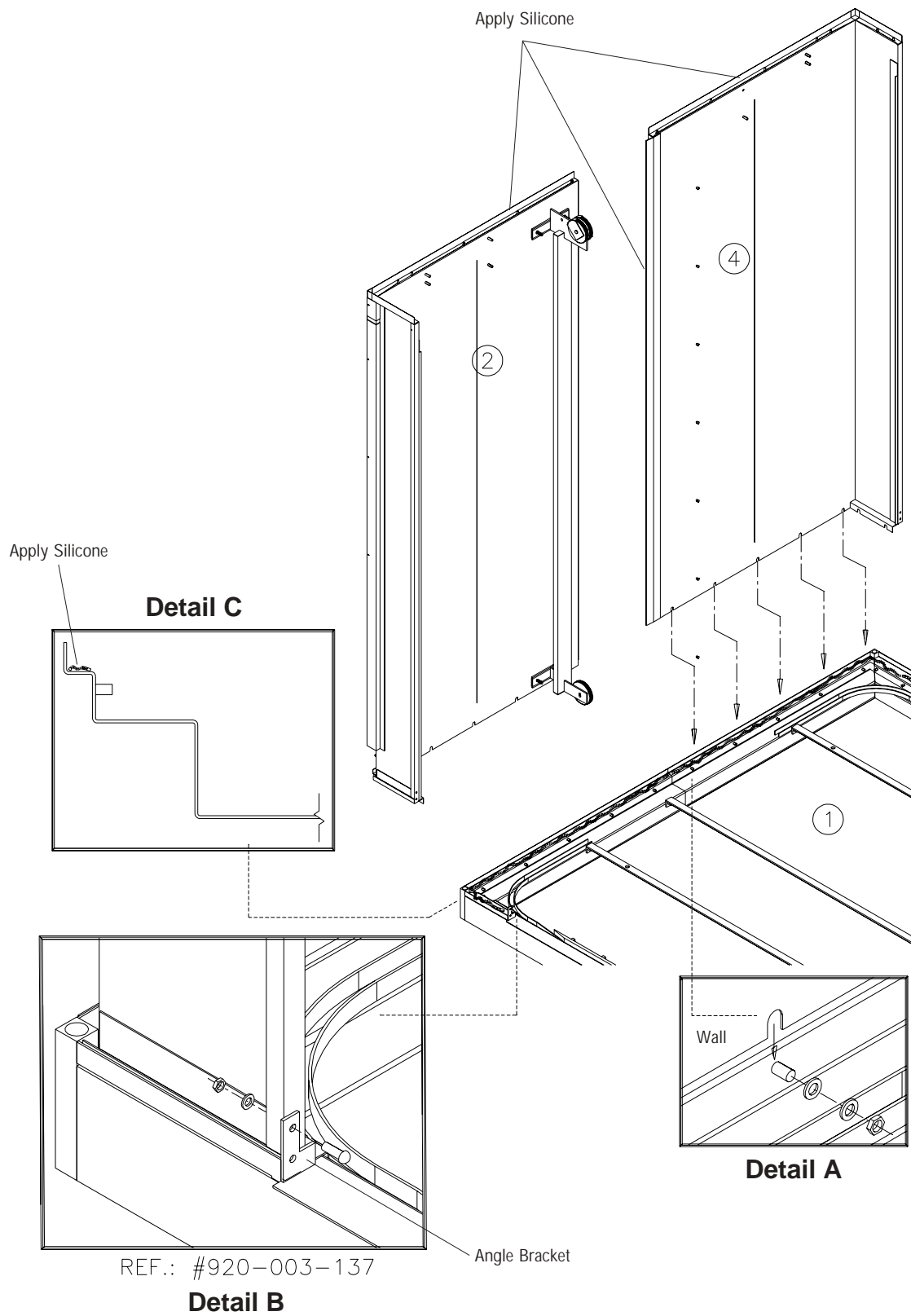
Figure 3-4. Non-Service Side Walls

3.2.3 Non-Service Side Walls

Figure 3-4

IMPORTANT: Two people minimum are required to assemble side walls.

1. Spread a 3/8 inch (11 mm) bead of silicone on non-service side sump base (1).

2. Spread a 3/8 inch (11 mm) bead of silicone on top and side of left corner panel (2).

NOTE: For washer installation with no clearance on non-service side of wash cabinet, bolt non-service side panels together (step 6), before bringing panels close to the washer.

3. Bring left corner panel (2) using installation cutout handles. Seat over sump, behind angle brackets (see Detail B).

NOTE: Finger-tighten the 1/4 - 20 bolts first to support the panel.

4. Finger-tighten hardware holding corner panels to sump, use 5/16 washers, 5/16 spring washers, and nuts at bottom of sump (see Detail A). Use 1/4 - 20 x 3/4 bolts, 1/4 lockwashers, and 1/4-20 nuts for angle brackets (see Detail B).

5. Repeat steps 2 through 4 to install right non-service corner panels (4).

6. From outside, on non-service side, fix non-service side panels together, using four 5/16-18 x 3/4 bolts, eight 5/16 washers, and four 5/16 lockwashers provided.

7. Tighten wall to sump and secure wall to angle brackets (see Detail B).

8. Spread a 3/8 inch (11 mm) bead of silicone on central joint of panel (see Detail C).

Apply Silicone

98

5

99

97

1

7

Angle Bracket

Detail A

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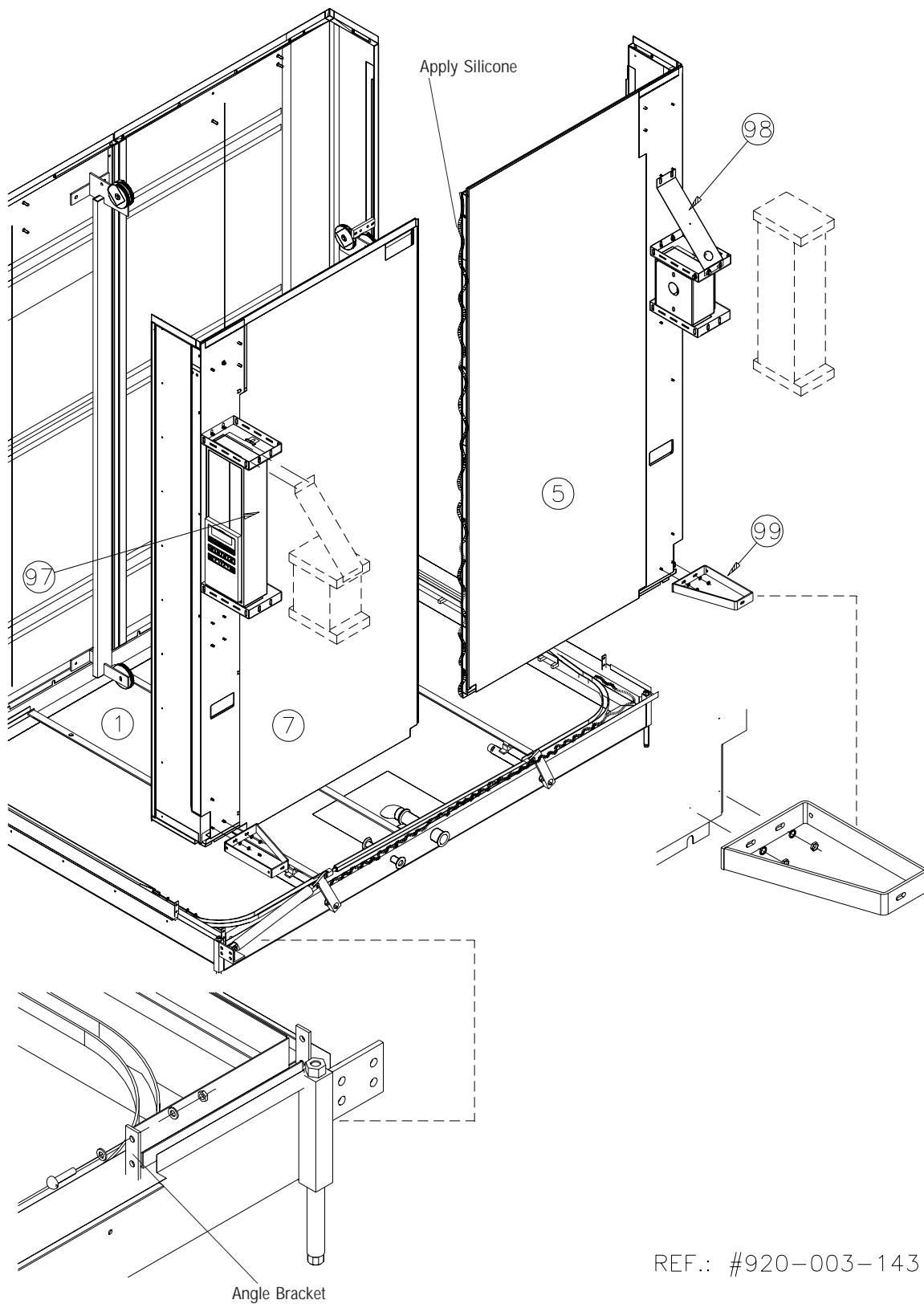
Figure 3-5. Service Side Panels

3.2.4 Service Side Panels

Figures 3-4 and 3-5

IMPORTANT: Two people minimum are required to assemble side walls.

1. Apply a 3/8 inch (11 mm) bead of silicone on service side sump base (1).

2. Apply a 3/8 inch (11 mm) bead of silicone on side of right corner panels (5).

3. Bring right corner service side panel (5) and seat over sump, behind angle brackets (see Figure 3-4, Detail A).

NOTE: Finger-tighten the 1/4-20 bolts first to support the panel.

4. Finger-tighten hardware holding corner panels to sump. Use 5/16 washers, 5/16 springwashers and nuts at bottom of sump (see Figure 3-4, Detail A). Use 1/4 - 20 x 3/4 bolts, 1/4 lockwashers, and 1/4-20 nuts for angle brackets (see Figure 3-4 Detail B).

5. Repeat steps 2 through 4 to install left corner service side (6).

6. From outside, on service side, fix service side panels together, using four 5/16-18 x 3/4 bolts, eight 5/16 washers, four 5/16 lockwashers, and nuts provided.

7. Tighten wall to sump and secure wall to angle brackets.

3.2.5 Control Configuration

Single door units:

Install Main Control (97) on unit, using 1/4 washers and 1/4-20 nuts provided. Make final adjustment when installing cabinet and tighten hardware (39, or 40) (See Figure 3-4 and 3-11).

Double door units:

NOTE: Controls can be installed to suit customer requirements.

Factory installation: Main Control, (97) is installed to the right and remote control (98) is installed to the left (operator facing service side of unit).

1. To change printer location, dismantle both support with controls, (controls should stay on supports) (see Figure 3-5) and re-install on opposite ends of washer, using 1/4 washers and 1/4-20 nuts provided.

2. Install control cabinet supports (99), one bottom right and one bottom left corner, using 1/4 washers and 1/4-20 nuts provided. Make final adjustments when installing cabinet (39, 40) and tghten hardware (see Figure 3-14).

⑨

Studs
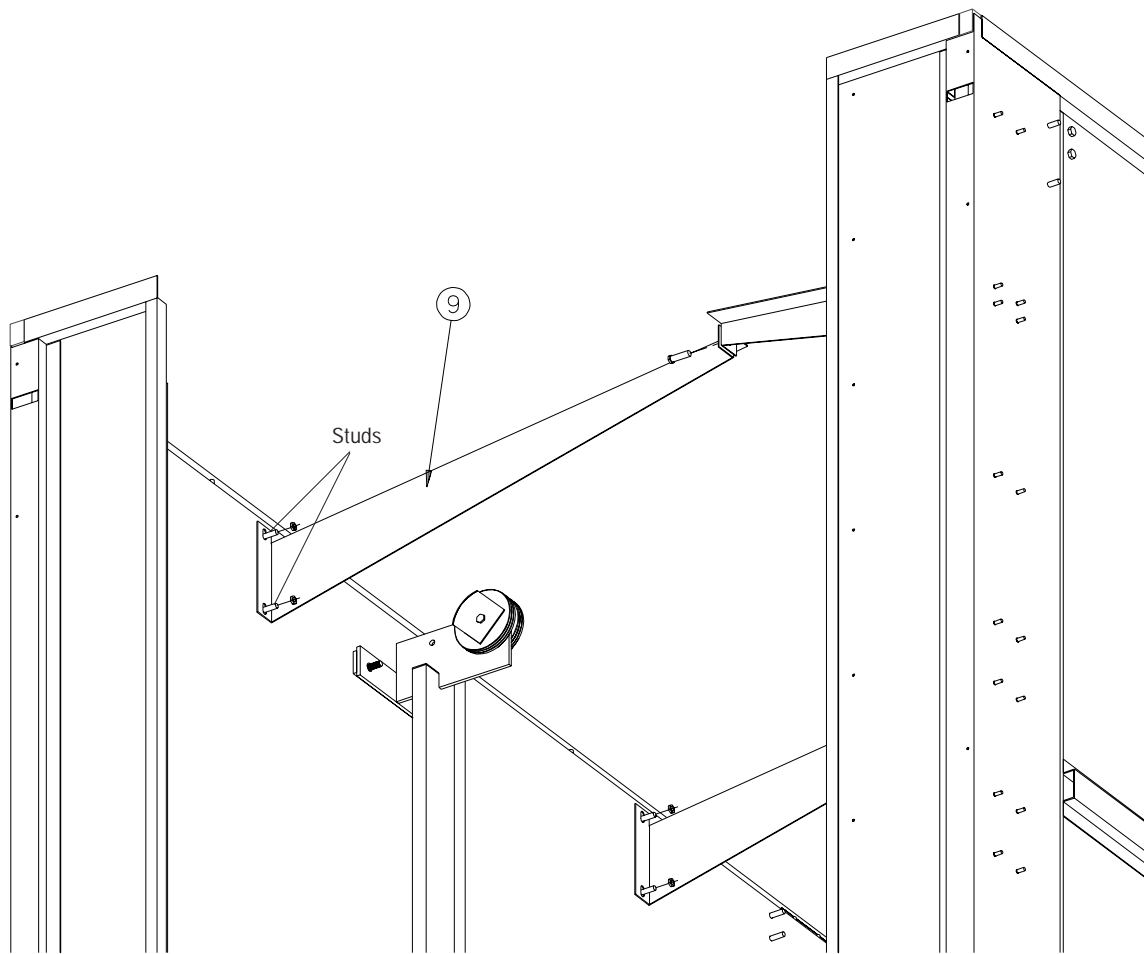
REF.: #920-003-148

Figure 3-6. Temporary Roof Support

3.2.6 Temporary Roof Support

Figure 3-6

1. On each side of washer, install temporary roof mounting supports (9). Position supports so they are in the highest position. Bolt temporary roof mounting supports to wall, using 5/16-18 nuts and 5/16 washers provided.

2. Bolt supports together in the middle with 5/16 -18 x 3/4 bolts, 5/16 washers and 5/16 nuts.

Detail A

Roof, apply Silicone

Side Wall Stud
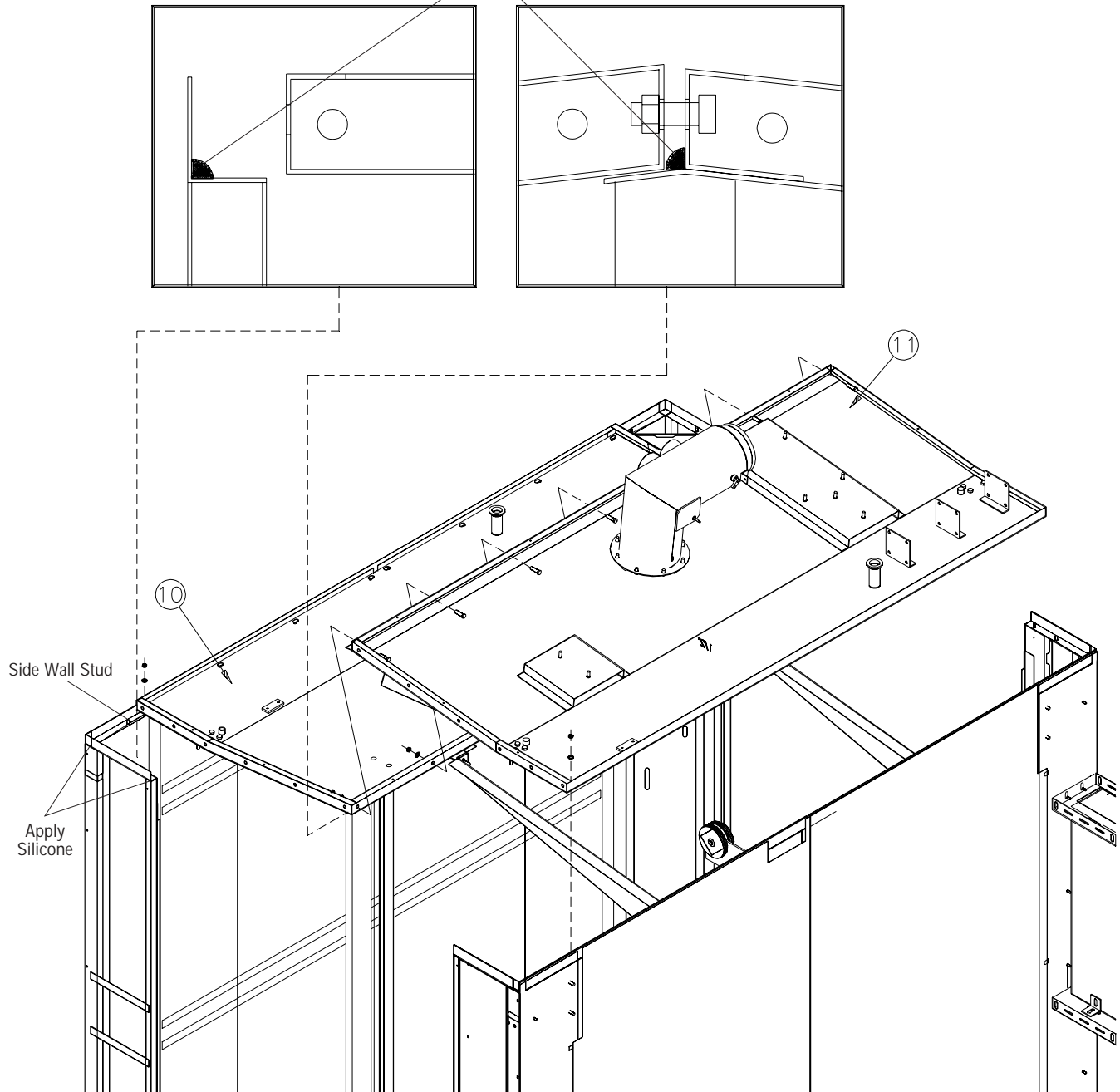
Apply Silicone

REF.: #920-003-154

Figure 3-7. Roof

3.2.7 Roof

Figure 3-7

IMPORTANT: Installation of roof must be completed within 45 minutes maximum, before silicone starts to dry.

NOTE: Refer to Equipment Drawing 122998-061 for clearance.

1. Apply a 3/8 inch (11 mm) bead of silicone along the corner of side panels, non-service and service side (see Detail A).

2. Slide non-service side roof (10) over temporary mounting supports aligning holes and studs.

3. Apply a 3/8 inch (11 mm) bead of silicone on edge of service side roof panel (see Detail A).

4. Slide service-side roof (11) over temporary mounting supports.

IMPORTANT: Do not tighten nuts yet.

5. Assemble roof sections, using 5/16-18 x 3/4" bolts, 5/16-18 washers, 5/16-18 lockwashers and 5/16-18 nuts provided.

6. Bolt roof sections to side wall studs, using 5/16-18 nuts, 5/16 washers, and 5/16-18 lockwashers provided. Do not tighten.

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3.2.8 Crate B   Contents:

- Two Roof End Sections (pre-assembled), Left (12) and Right (13).
- Door Rails Supports, two for single door units (41, 42), four for double door units (43, 44).
- Exterior Stainless Steel Jacket Panels, non-service side (14,15) (Option).
- Exhaust Fan (17) (option).
- Oil Tanks, left (18), right (16).
- Main Air Duct (19) (option, drying).
- Four Secondary Drying Ducts (20, 21, 22, 23) (option).
- Two Air Exhaust Ducts (24, 25).
- Two Spray Header Inlet Piping (26 long, 27 short).
- Traveler System Assembly (28).
- Guard Rails, Non-service side (29), and Service side (30).
- Spray Headers, Non-service side (35) and Service side (36).
- Cabinet Panel, Left non-service side (37).
- Cabinet Panel, Right non-service side (38).
- Cabinet Panel, Left service side (39).
- Cabinet Panel, Right service side (40).
- Door Frames,(45) and (46); If double door unit: Door Frames, (47) and (48).
- Door Panels (45 a) (45 b) and (46 a) (46 b); If double door unit: (47 a) (47 b) (48 a) and (48 b).
- Roller Guide (52).
- Spray Header Guide (49) (53).
- Roof Stoppers (54).
- Ventilation Duct Assembly (with gaskets) (55).
- Pulley Guards (56).
- Single Door Panels (option) (57), cover plates (63).
- Traveler System Driver Cable (66).
- Traveler System Safety Cable (67).
- Front Service Panels (76) (77) (if double door unit).
- Temporary Roof End Mounting Bracket (86).
- Transition Plate (91) (92) (Option).
- Transition Plate Support (93) (94) (95) (Option).

Apply Silicone

REF.: #920-003-156

DETAIL A

Door Guide
Support Angle
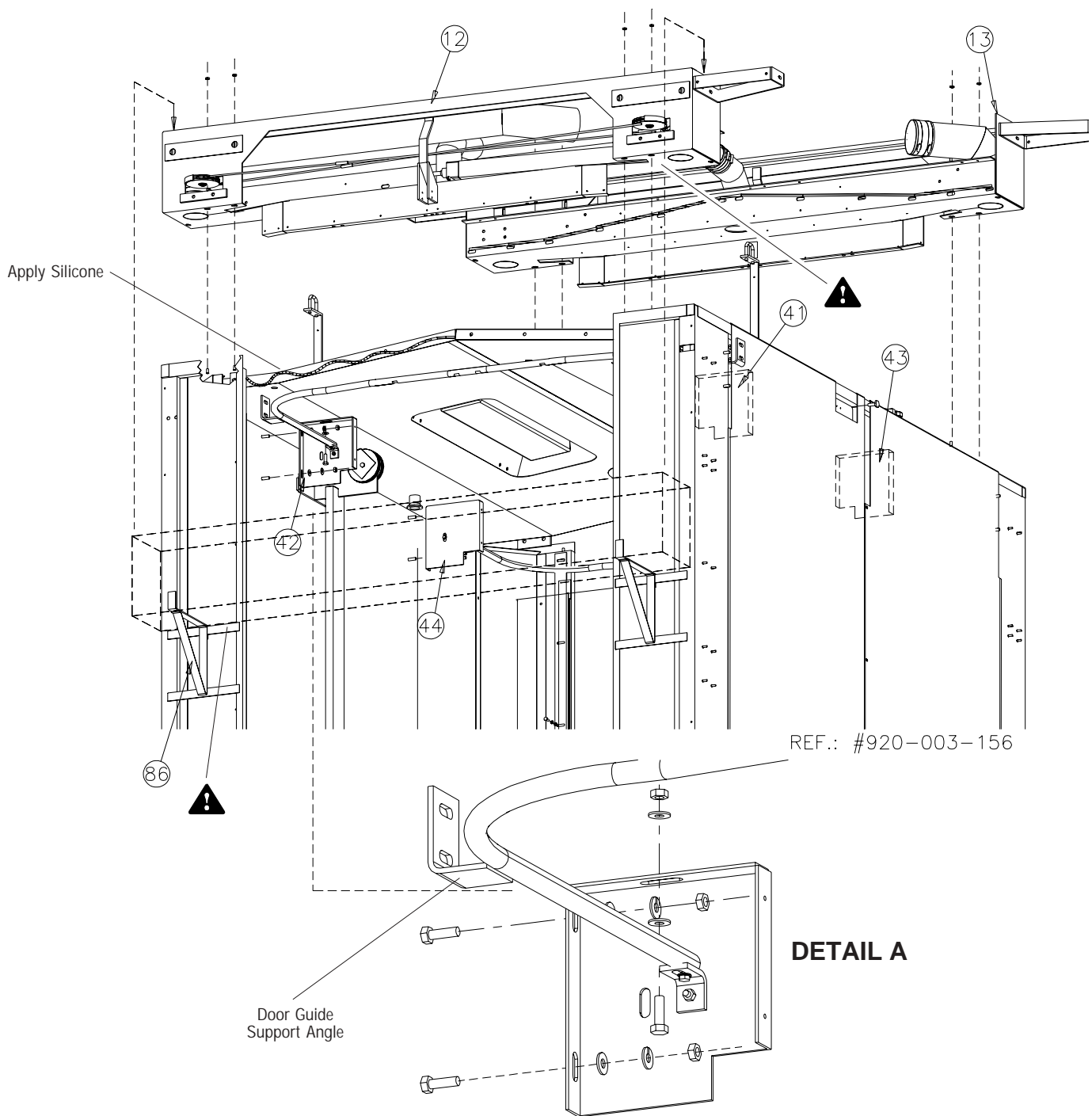
Figure 3-8. Roof End

3.2.9 Roof End

WARNING – PERSONAL IN-JURY HAZARD: Two people are required to install the roof end sections. Using a step ladder, first set roof end on temporary roof end support brackets, then lift up and sit into position.

Figure 3-8

1. Spread a 3/8 inch (11 mm) bead of silicone on edge of roof.

2. On (both) side(s) of washer (for a double door unit), install Temporary Roof End mounting brackets (86). Position brackets so they are in the highest position.

3. Lift left-end roof section (12) and place on temporary roof end support brackets (86). Lift over edge of roof and sit into position. Align holes and studs. Bolt into place.

4. Repeat steps 1 through 3 for right-end section (13).

5. On each end, bolt roof end sections to roof using 5/16-18 x 3/4 bolts, 5/16 washers, and 5/16 lockwashers provided. Do not tighten yet.

6. Bolt roof ends on side wall panel corner studs using 5/16 washers, 5/16 lockwashers, and 5/16-18 nuts.

7. Remove temporary roof end mounting brackets (9).

8. Tighten all nuts on top of unit (center and edges of roof panels).

9. From inside washer, screw drying ducts to roof.

Door Rail Holder

Rail Holder Angle

Guide Rail Holder

Studs

42

Door Rail

41

Fix to End Roof Fold
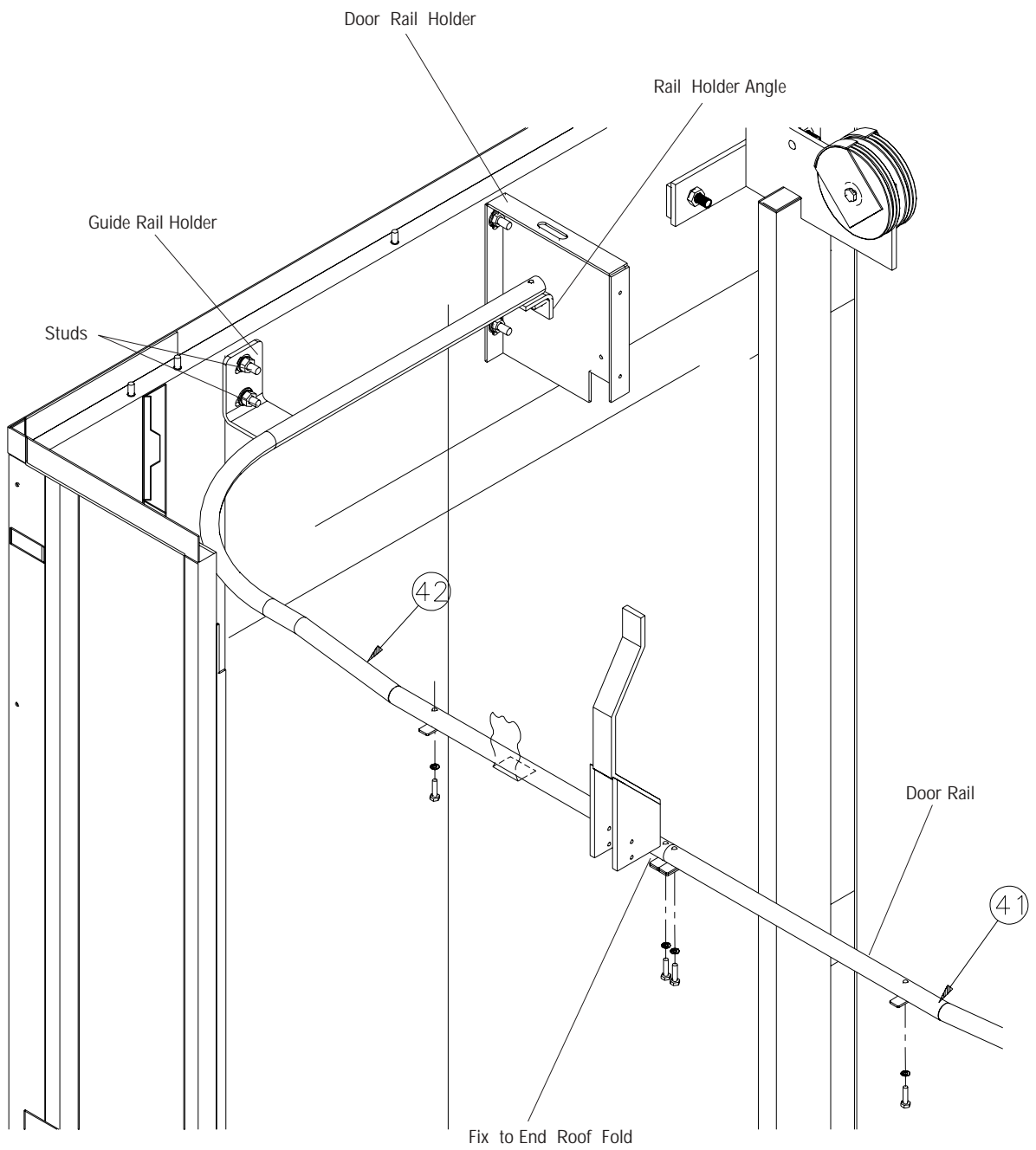
REF.:#920-003-165

Figure 3-9. Door Rail Holders

3.2.10 Door Rail Holders   Figure 3-9

1. Install door rail supports (41, 42, 43, 44) on interior cabinet walls and roof, using 5/16-18 nuts, 5/16 washers, 5/16 lockwashers, and 5/16 nuts (see Figure 3-8, Detail A).

2. Install door rails (two on single units, four on double-door units) on door guide support angles using setscrews.

3. Opposite end of rails should sit on end roof fold. Bolt rails to end roof fold using 1/4-20 x 3/4 nuts and lockwashers.

4. Tighten roof and door guide assemblies in the following order: bolts on top of roof, bolts on guide rail holders.

Detail A
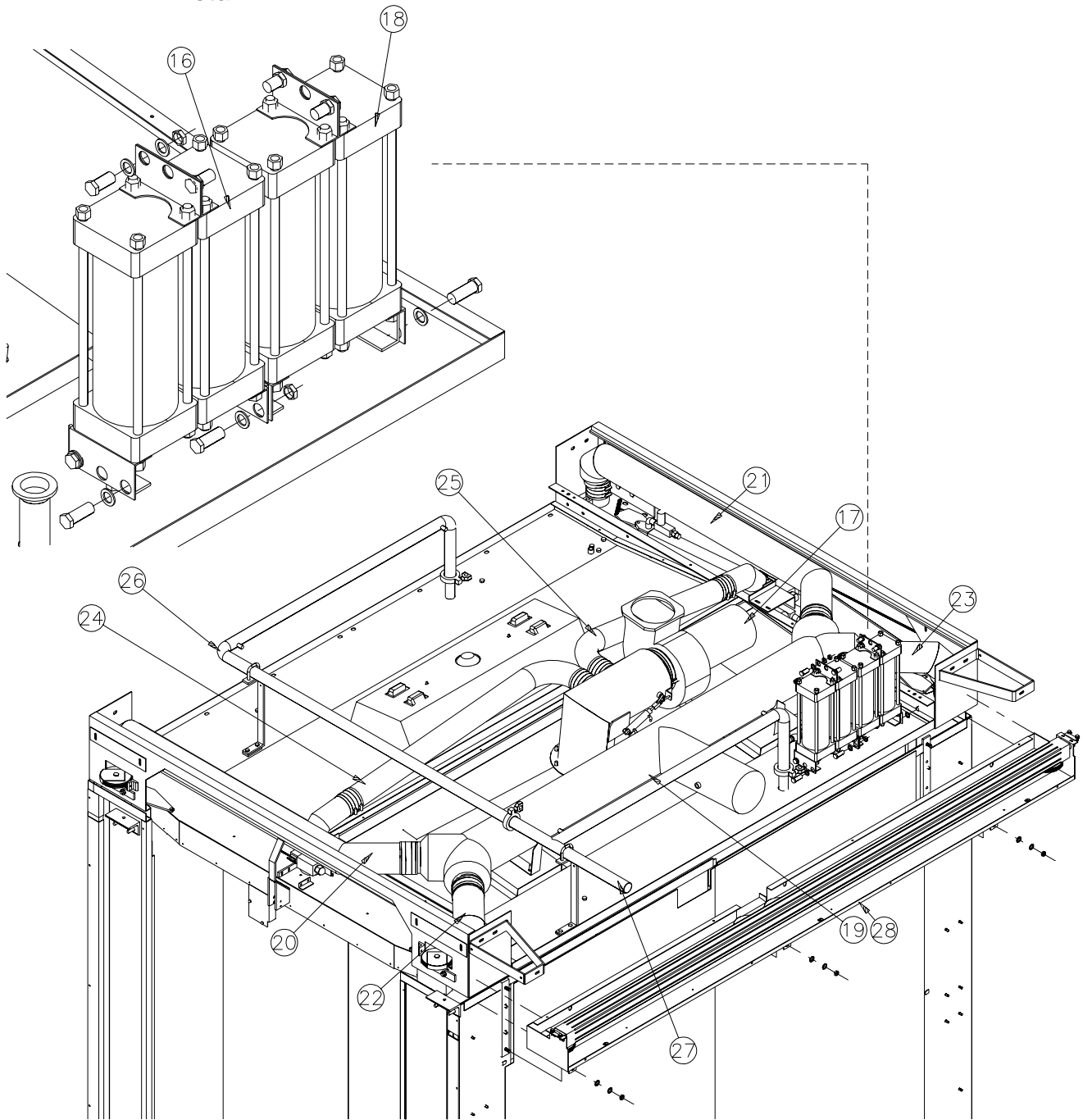
REF.: #920-003-158

Figure 3-9. Roof Components

3.2.12 Roof Components

Figure 3-10

1. On service side, install main drying manifold (19) (option) on roof, finger-tighten 5/16 washers, 5/16 lockwashers, and 5/16-18 nuts.

2. Install exhaust fan (17) (option) on service-side roof using 5/16-18 x 3/4 bolts, 5/16 lockwashers, 5/16 washers, 5/16 nuts and pre-assembled collar and gaskets on damper.

3. Install roof piping with supports (26) on non-service side and (27) on service side, using 1/4 spring washers, 1/4 washers, and 1/4-20 x 1/ 2 bolts.

4. Install secondary drying manifolds (20, 21, 22, 23), using clamps and gaskets already installed on manifolds.

5. Install damper suction piping (24, 25) using collar and gaskets already installed.

6. Install oil tanks (16) (single door unit) or (16 and 18) (double door units) and bolt into place using 5/16-18 x 1 bolts, 5/16 washers, 5/16 lockwashers and 5/16-18 nuts (see Detail A).

7. Tighten hardware.

8. Install traveler drive mechanism (28) on service side wall using studs welded to walls to fix supports. Use 3/8 washers, 3/8 lockwashers and 3/8-16 nuts provided.

Apply Silicone

63

Apply Silicone

Apply Silicone

57

Apply Silicone

REF.:#920-003-169
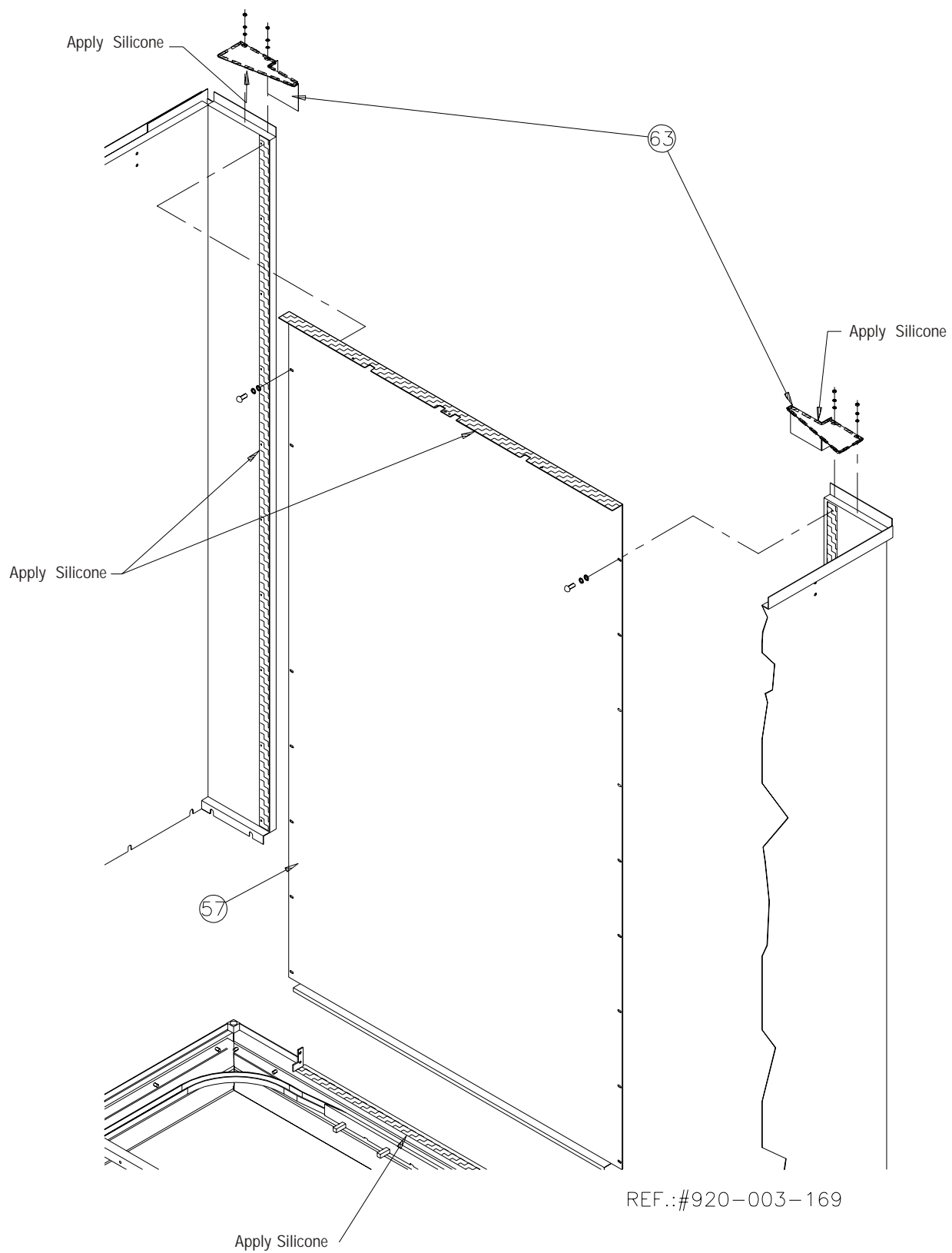
Figure 3-11. Single-Door Washer Back Panel (Option)

3.2.13 Single-Door Washer Back Panel Installation (option)

Figure 3-11

IMPORTANT: For single door units, install Back Panel before installing Emergency Guard Rails.

1. Apply silicone on cabinet corners and on door frames.

2. Secure back panel (57) to side walls using 10 - 32 x 1/2 screws, 3/16 washers, and 3/16 lockwashers provided.

3. Remove nut from corner (see Figure 3-17).

4. Apply silicone on upper corner panels.

5. Install cover plates (63) on top of right and left cabinet corners.

Detail A

Microswitch Actuator

Rod

Top Guard Rails Installation

Roof Hole

Stud

Gasket

Roof Connection

Detail B

49

35

36

29

30

Emergency Guard Rail

32

33

31

53

Plastic Support

REF.: #920-003-162

Bottom Guard Rails Assembly

Detail C
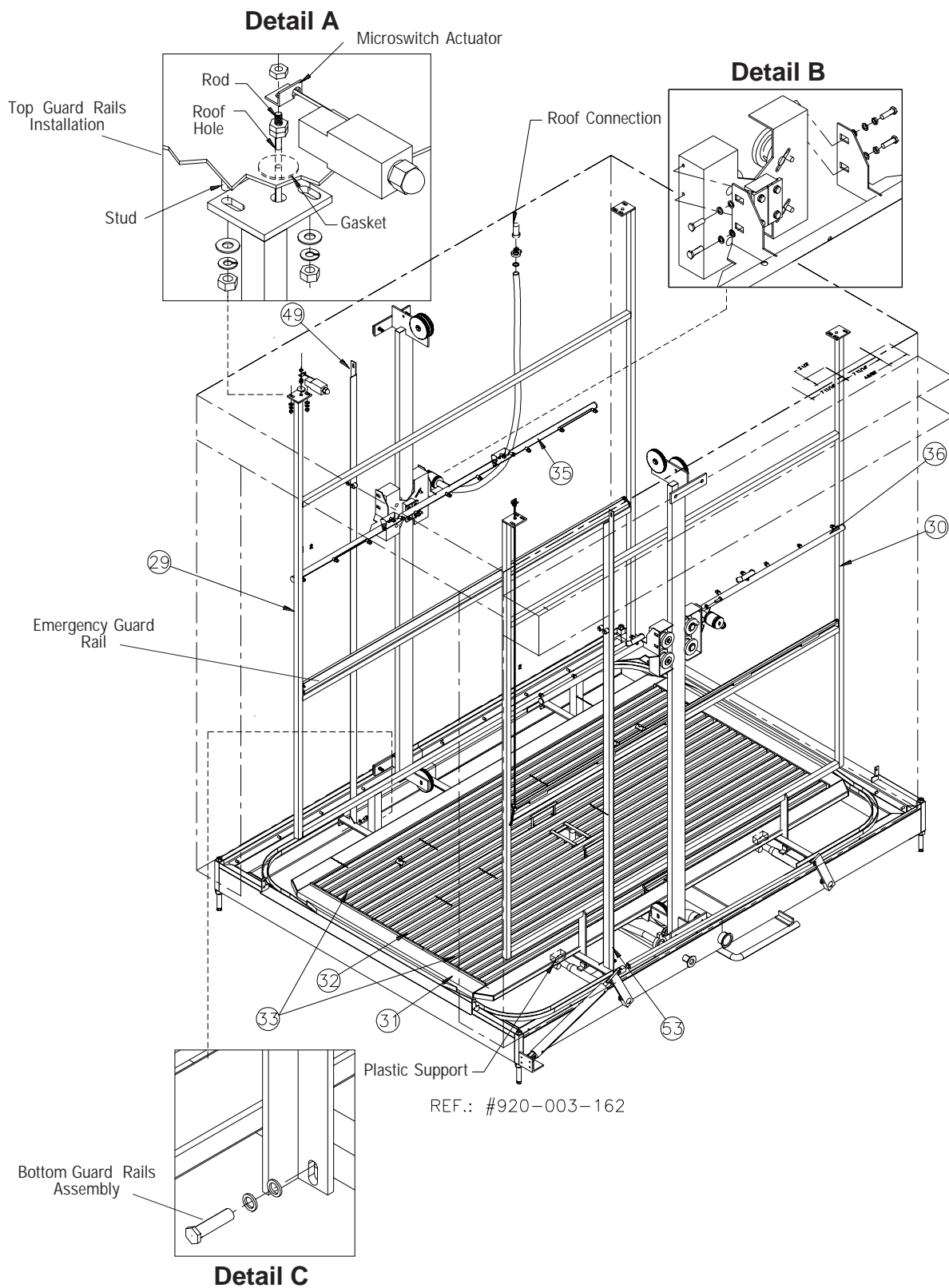
Figgure 3-12. Crate D: Inside Chamber Components

3.2.14 Emergency Guard Rails

Figure 3-12

IMPORTANT: For single door units, Back Panel must be installed before installing Emergency Guard Rails. Refer to Section 3.2.13, "Single-Door Washer Back Panel Installation."

1. Remove floor gratings and floor frame.

2. Remove nuts and microswitch actuator from end of guard rail (29, 30).

3. On non-service side, install guard rail (29). Insert top of rod into roof holes.

4. Fix guard rail frame to roof studs. Make sure gasket is inserted between roof and top of guard rail frame. Finger-tighten 5/16 washers, 5/16 lockwashers, and 5/16-18 nuts (see Detail A).

5. Finger-tighten hardware to fix bottom of guard rail frame to the floor frame using two 5/16 -18 x 1 bolts, 5/16 lockwashers, and 5/16 flat washers provided (Detail C).

6. Repeat steps 2 through 5 for service side guard rail.

7. Distance between the two guard rails (side to side) should be 46" (1.168 m). Adjust if necessary. Tighten all hardware.

8. Lower guard rail.

9. On top of wash chamber, re-install nuts and actuator on guard rail rod. Raise actuator until microswitch rod rests into actuator notch. Tighten three nuts to fix actuator. The microswitch should "click" when raised.

10. From inside wash chamber raise guard rail.

11. On top of washer, check for proper adjustment of actuator. Microswitch should move freely, without clicking, when guard rail is raised.

12. Re-install floor frame (31) and floor gratings (32, 33).

NOTE: Microswitch must be triggered when Emergency Guard Rail is raised.
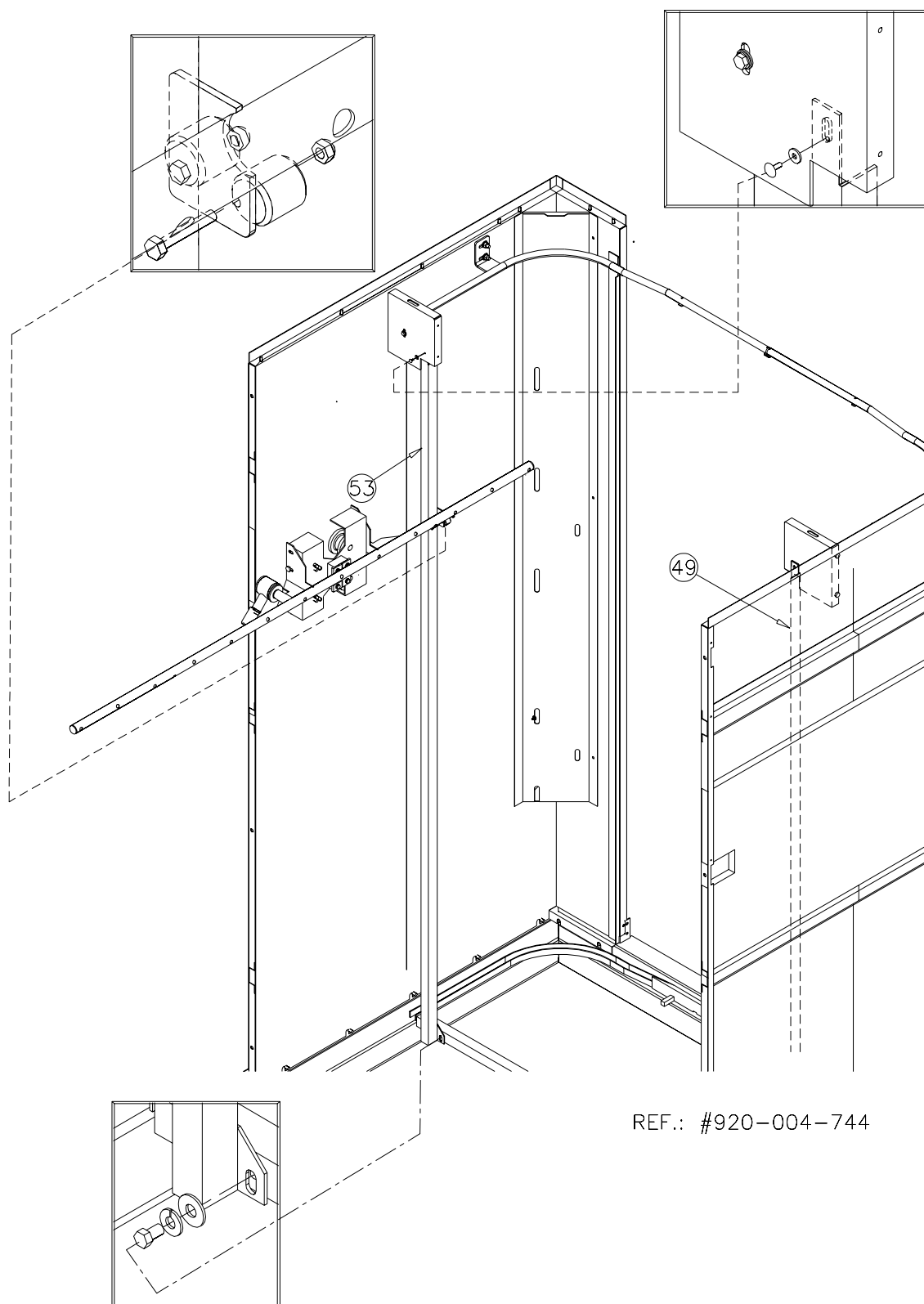
REF.: #920-004-744

Figure 3-13. Spray Headers

3.2.15 Spray Headers Figures 3-12 and 3-13

1. On non-service side, install spray headers (35) on pre-assembled spray header mechanism (see Figure 3-1,2 Detail B), using 1/4-20 x1/2 bolts provided securing plate, 1/4 washers, and 1/4 lockwasher on mechanism.

2. Connect end of hoses to roof connections, using clamps and gaskets provided. Prior to tightening clamps, twist hose towards cabinet approximately 1/2 turn. Tighten all clamps. Verify that hose is close to side wall. Loosen and twist 1/2 turn until hose moves freely along the wall.

3. Install spray header guide (49) using 8-32 x 3/8 screw and 3/16 washer on top: fix bottom of guide using 5/16 washer and 5/16 lock washer (see Figure 3-13).

NOTE: Make sure guide fold is inserted between the two plastic roller guides fixed to spray header.

4. Repeat steps 1 and 2 for service side spray headers (36).

DETAIL A

Blank Sticker

40

RIGHT SIDE

38

Side Fixation

Front
Fixation

14

15

37

39

LEFT SIDE

REF.: #920-003-171
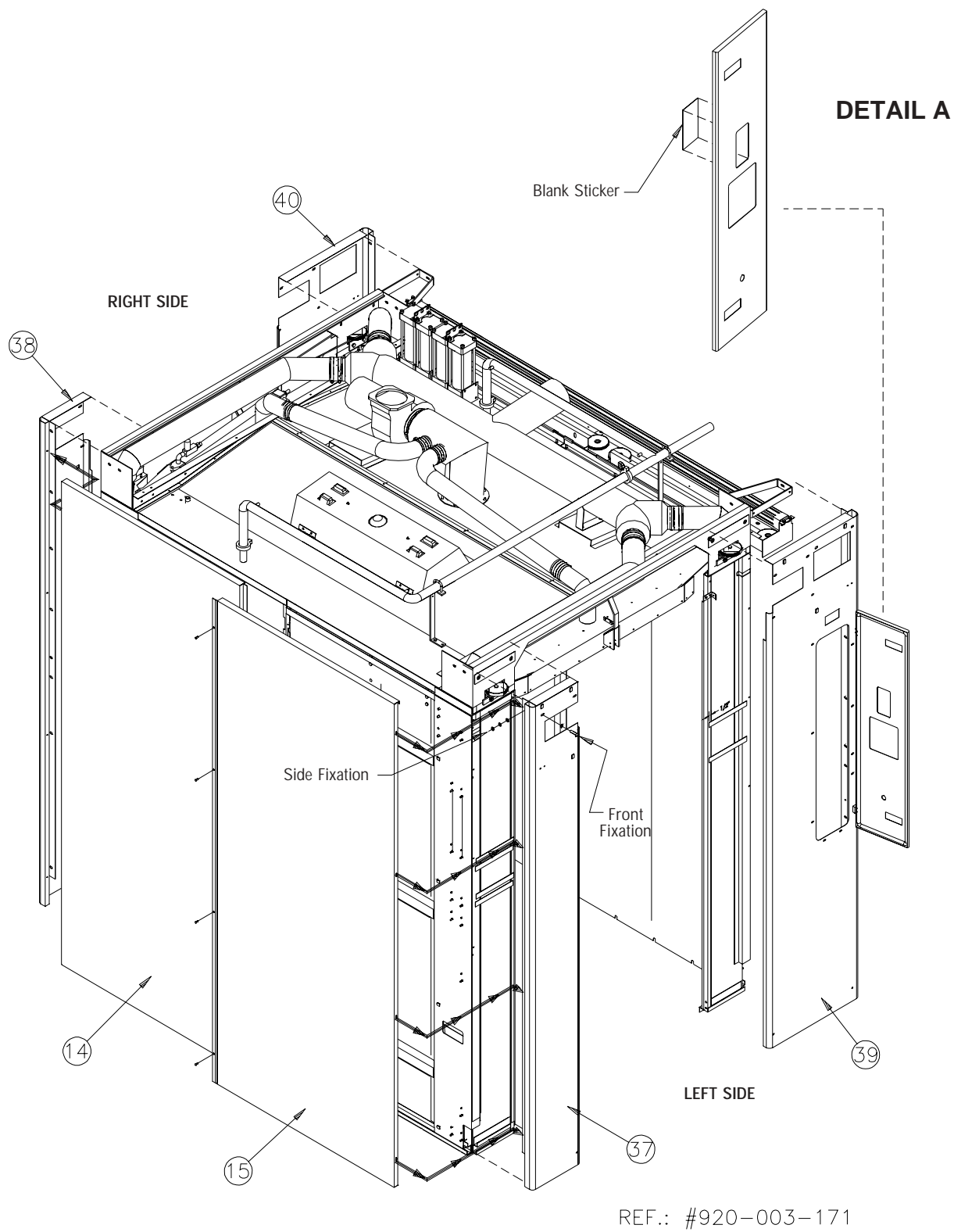
Figure 3-14. Cabinet Corners

3.2.16 Cabinet Corners

Figure 3-14

NOTE: Match cabinet corner number to corresponding number on cabinet side.

1. Install cabinet control side panel (39 and/or 40) using two 1/4-20 x 3/4 bolts, 1/4 washers and lockwashers, 1/4-20 nuts, and two 10-32 x 3/8 screws.

2. Install cabinet non-control side panel (37 and/or 38), using 1/4 washers 1/4 lockwashers, and 1/4-20 nuts.

NOTE: For single door units with Exterior Stainless Steel Jacket option, configuration will include corner panels: 37, 38, 39, 40.

3. Single door unit without Exterior Stainless Steel Jacket option:

• A set of panels (37 and 39 or 38 and 40) will be installed depending on control side.

4. Double door unit configuration will include cabinet panels 37, 38, 39 and 40.

5. Non-service side cabinet option installation:

NOTE: View Point is from service side.

• Install exterior stainless steel jacket panel, non-service, right (14), using 10-32 x 1-1/4 screws and 3/16 washers.

• Install exterior stainless steel jacket panel, non-service, left (15) using 10-32 x 1/4 screws and 3/16 washers.

NOTE: For floor mounted units with Exterior Stainless Steel Jacket option, install base covering panel on non-service side.

3.2.17 Control Panel Adjustment

Figure 3-14

NOTE: Control Configuration. If controls have been changed from one side to the other, align control with control door window, as follows:

1. Close locks on control door.

2. Place control next to transparent membrane as if to operate control touch pad (see Figure 3-14, Detail A).

3. Align control with door window.

4. Tighten nuts.

5. Use Blank Sticker to cover printer window on secondary control side.

NOTE: Control Configuration verification will be performed later in Section 5, Start-Up Test.

Detail A

Detail D

Detail B

48 47

46 45
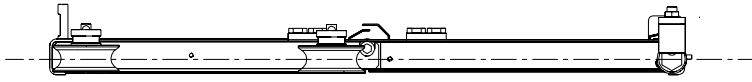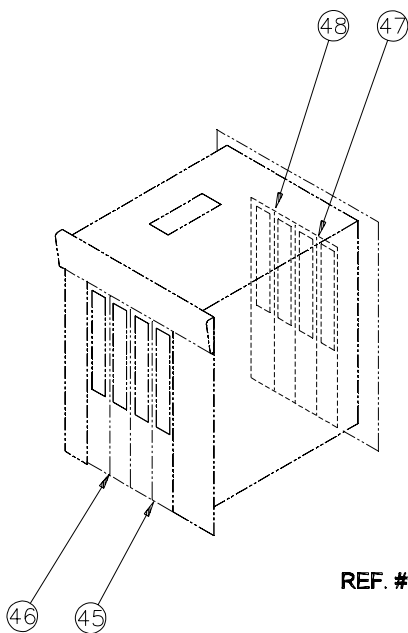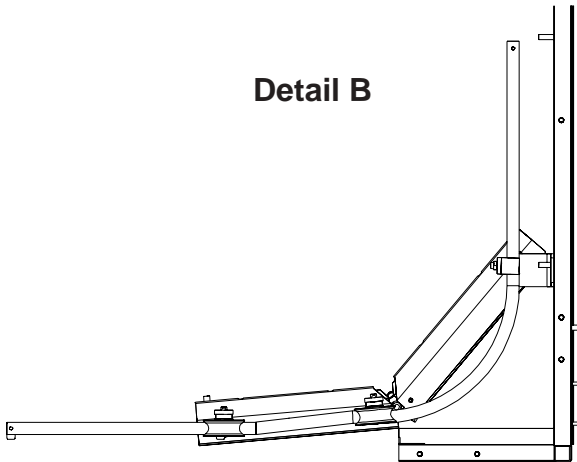
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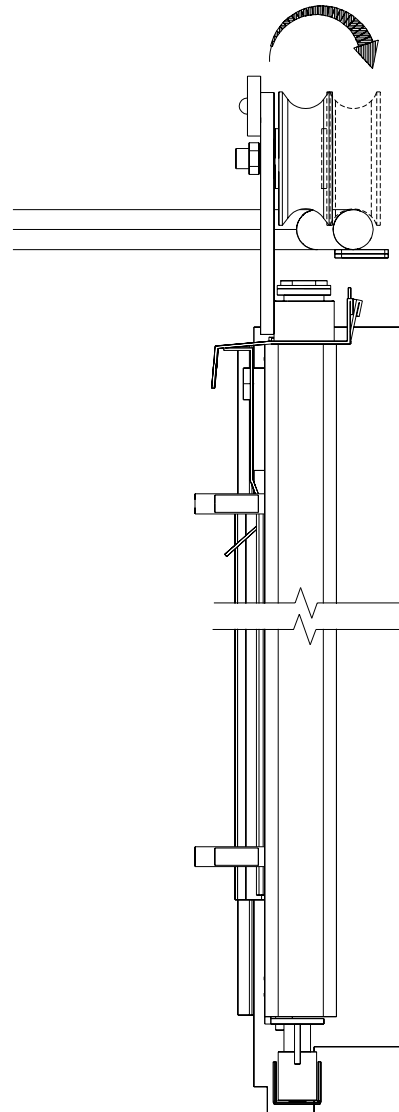
Figure 3-15. Door Frames

Detail C

3.2.18 Door Frames Figure 3-15

1. Align top pulleys (see Detail A).

2. Install door frame (45) halfway into corner. Make sure bottom hinges are aligned with door opening (see Detail B).

3. From inside unit, lift door frame placing bottom rollers into door rails (see Detail C).

4. Lift door frame to install top rollers and adjust door frame (see Detail D).

5. Install door frame (46) following the same procedure.

6. On double door units, repeat steps 1 through 4 for door frames (47) and (48).
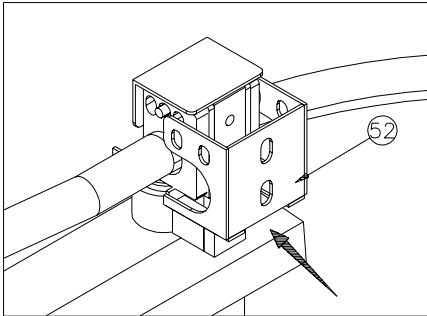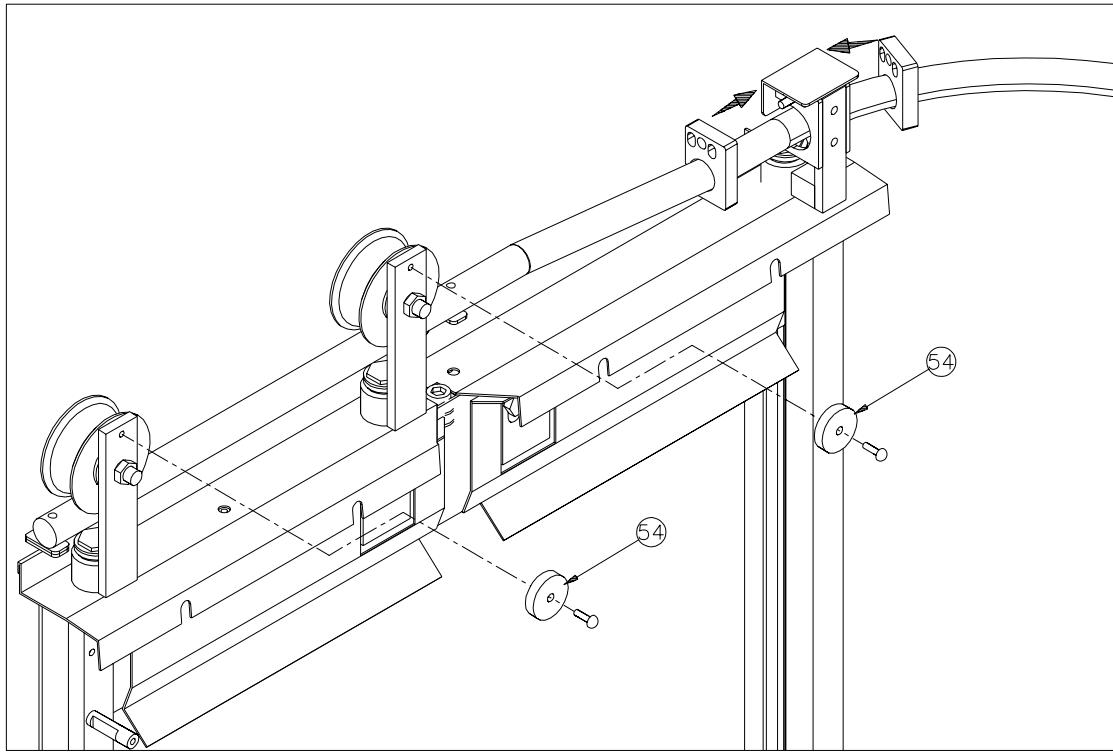
Detail A
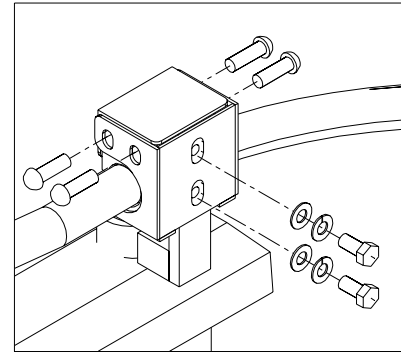
Detail B
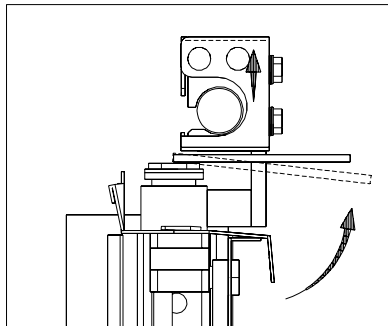
Detail C

REF.: #920-004-648

Figure 3-16. Roller Stoppers

3.2.19 Roller Stoppers   Figure 3-16

1. Slide door frame inside washer.

2. Remove plastic tape from plastic blocks (see Figure 3-15, Detail B).

3. Place plastic blocks on both sides of pivoting arm.

4. Push and snap cover (52) onto plastic block and pivoting arm (see Detail A).

5. Finger tighten two (1/4-20 x 1/2) bolts, washers and lockwashers; and four (10-32 3/4) screws in place (see Detail B).

6. Pry slightly to make sure cover is flush with top of pivoting arm (see Detail C).

7. Tighten all bolts and screws.

8. Install roof stopper (54) on pulley support. Use 10/32 x1/2 screws (see Figure 3-14).

9. Slide doors on rails and verify that pivots and pulleys slide freely. Make sure stoppers slide under ventilation duct screws.

10. Repeat steps 1 through 5 for each door frame.

Detail C

Detail A

Ground Cables

Detail B

REF. #920-004-647

Figure 3-17. Door Panels
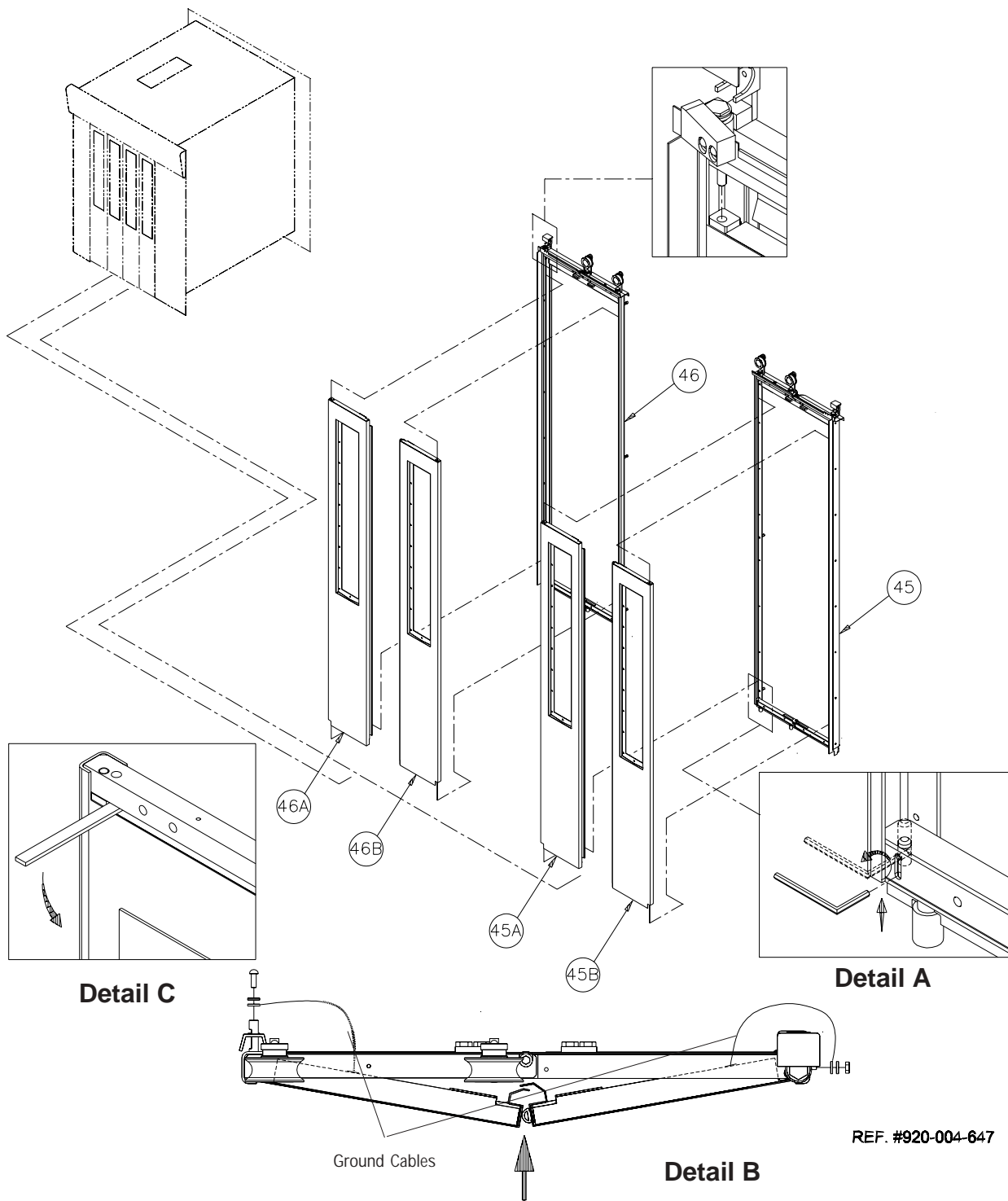
3.2.20 Door Panels

Figure 3-17

⚠ **WARNING – ELECTRICAL SHOCK HAZARD: Fasteners and star washers are used to ensure protective bonding continuity. Always reinstall any star washers which may have been removed during installation or servicing.**

⚠ **WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: Do not remove protective paper covering from front of doors until installation is complete. Paper secures exterior glass in place during transport and installation.**

⚠ **CAUTION– POSSIBLE EQUIPMENT DAMAGE: Do not remove adhesive tape from corner spring traps before installation of doors is completed.**

1. Install door panel (45 a). Align top and bottom bolts. Slightly lift door panel to adjust into lower rod by pushing door panel slightly at the bottom. Thighten bottom screw using a 3-32 allen hex key. Lock in upper position (see detail A).

2. Install door panel 45 b following step 1.

3. Install ground cables (see Detail B).

4. To close door sections, fold left side panel into right side panel, then press panels firmly into place (see Detail B).

NOTE: After installing corner spring trap guides remove adhesive paper from spring trap.

5. On double door units, repeat steps for door panels 47 a, 47 b, 48 a and 48 b (not shown).

NOTE: Do not remove white protective adhesive paper from window before completing installation of doors.

IMPORTANT: After completing installation of doors, insert a screw driver between door frame and door panels to pry doors downwards to make sure doors are adjusted in place (see Detail C).

End Roof
Section

Detail A

Ventilation Duct

Alignment Bolts

55

REF.: #920-004-478
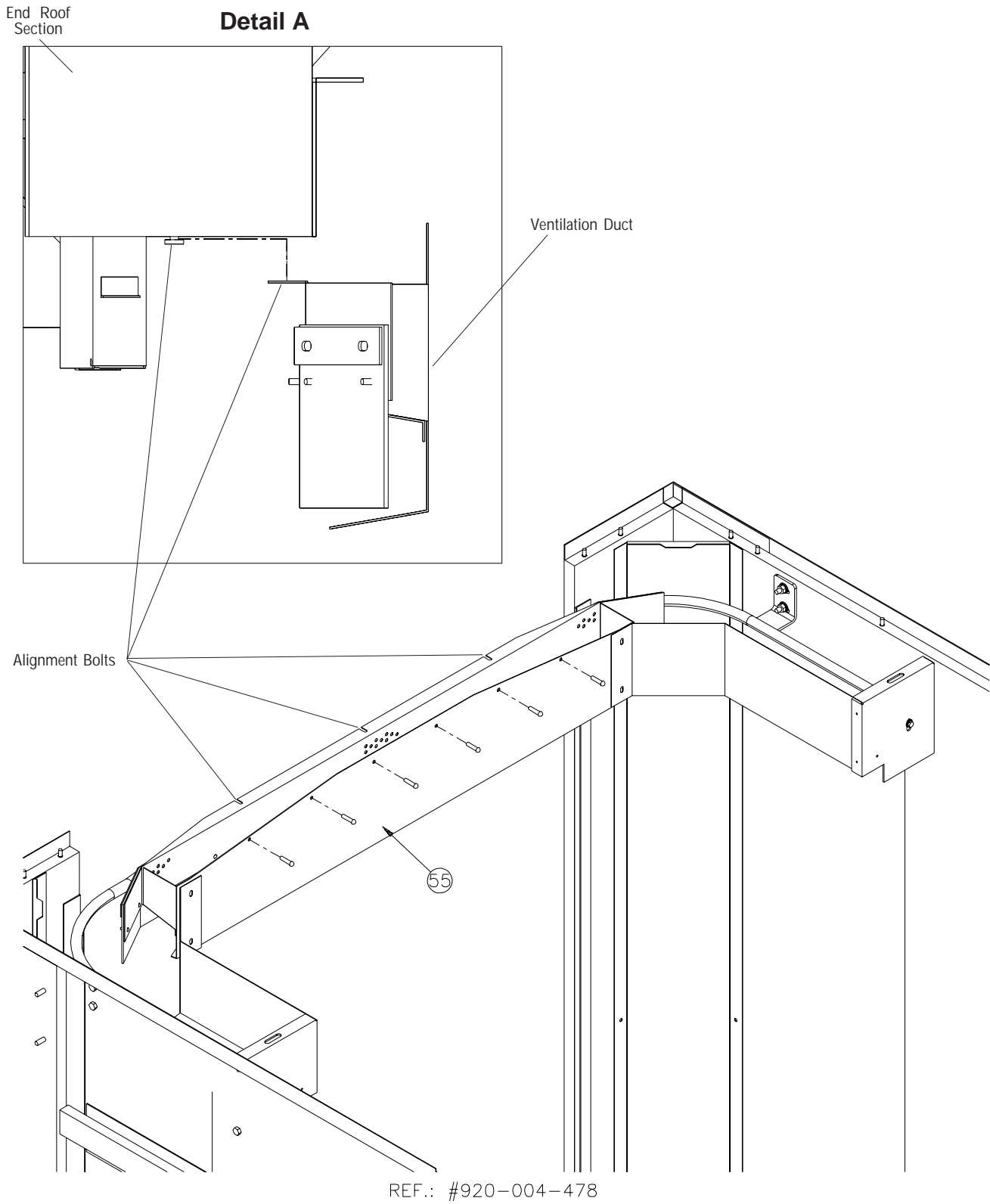
Figure 3-18. Ventilation Duct

3.2.21 Ventilation Duct   Figure 3-18

1. Completely slide doors inside washer.

2. Install ventilation duct (55) inside wash chamber, matching holes on end roof section (12), using 8/32 x 3/8 screws.

3. Slip duct gasket over door top baffle (see Figure 3-8).

   IMPORTANT: Make sure that Ventilation Duct slides and fits between the three alignment bolts and end roof section.

4. Repeat steps 1 through 3 on opposite end of washer.

5. Verify that doors open and close freely.

Ventilation Duct

Door Rail Holder

Fold

56
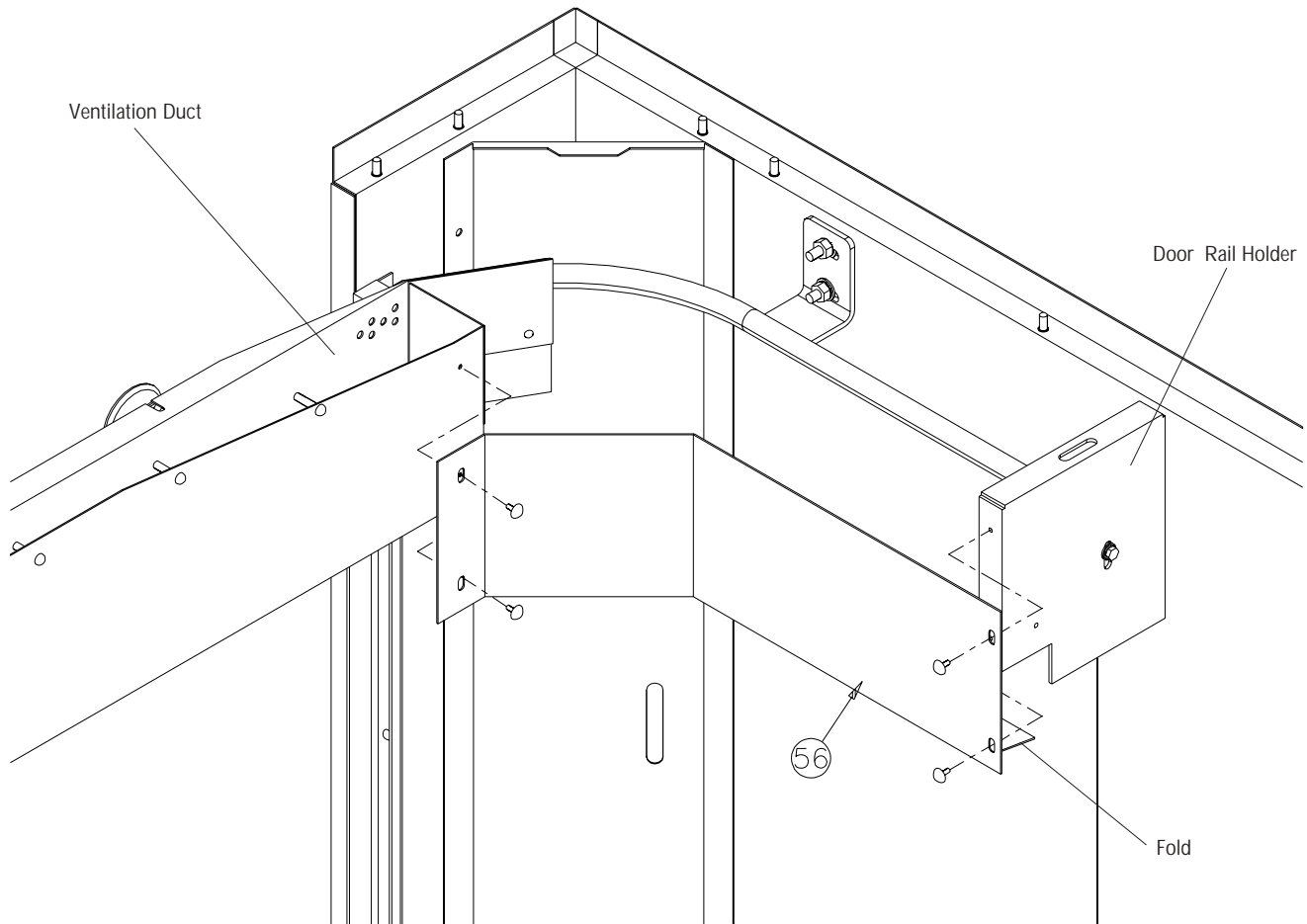
REF.: #920-003-170

Figure 3-19. Pulley Guards

3.2.22 Pulley Guards   Figure 3-19

1. Install pulley guards (56) in each corner of the unit (two on single door units, four on double door units), using four 8-32 x 1/4 screws to secure into position. Make sure that fold is facing down.

2. Check that doors open and close freely.

Detail B

Step 14

Cylinder

Step 18

Step 9

45°

Step 25

66

67

Step 12

Step 5   Step 4

Step 11

Step 10

Step 24

Step 3
Central Left
Pulley

Step 6

Step 2
Left Wing Pulley

Detail A

Cylinder
Bracket

Step 13

Step 1

Retention Plate

Step 8

Step 23

Step 7
Lower Service
Side Pulley
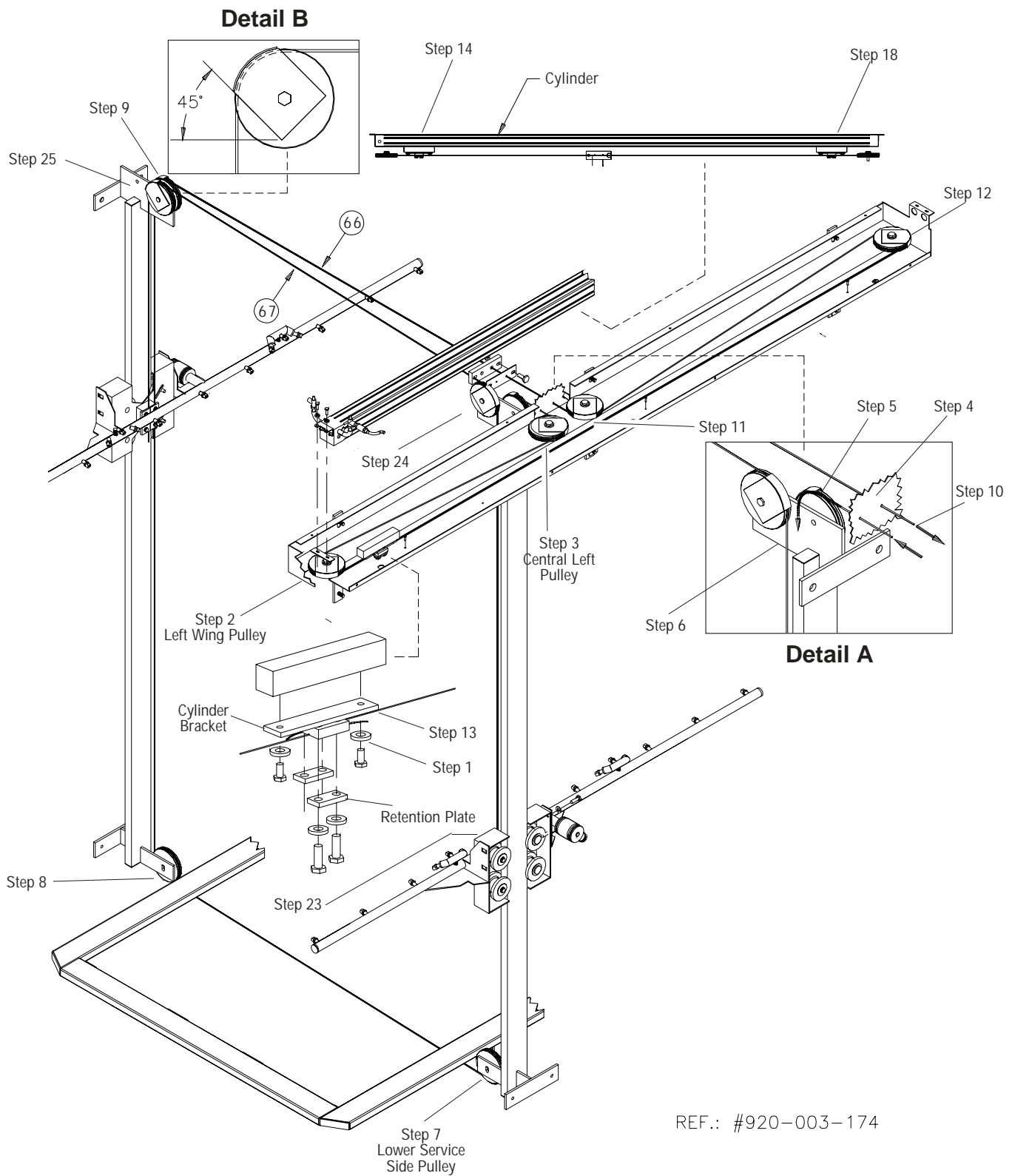
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Figure 3-20. Traveler Cable

3.2.23 Traveler Driver Cable

Figures 3-20 and 3-21

NOTE: Remove floor gratings from bottom of wash chamber.

Refer to numbers indicated on Figures 3-18 and 3-19.

• From outside, on service side:

1. To fix driver cable to cylinder bracket (66), run cable under retention plate from left. Be sure cable is inserted into retention plate groove. Leave approximately 1 inch (2,54 cm) of slack in cable. Tighten bolts (step 1).

2. Insert cable between pulley guard and left wing pulley (step 2).

3. Insert cable between pulley guard and central left pulley (step 3).

4. Pass cable through left wall hole (step 4).

• From inside unit:

5. Inside washer apply tension to cable (Detail A). Position cable around top left inside pulley. **Make sure cable does not touch guards.** Guards should be positioned at a 45° angle (Detail B) (step 5).

6. Insert cable between guard and left pulley. (pulley nearest to wall seen from inside) (step 6).

7. Run cable along service side wall. **Pass cable between spray header and roller mechanism.** Pass cable between lower service side pulley. Verify pulley is adjusted at highest point, if not, loosen and adjust to highest point. (step 7).

8. Run cable beneath floor frame until it reaches low non-service side pulley. Insert cable between guard and pulley. Be sure cable is not blocked between floor frame and sump frame (step 8).

9. **Pass cable between spray header and roller mechanism**. Pass cable through upper non-service side right pulley. Apply tension to cable . Be sure cable is correctly inserted in all pulleys and not touching any pulley guard (step 9).

10. Run cable across towards service side wall. Run cable through left hole (seen from inside) in plastic block (step 10).

• From outside unit:

11. Pull out cable from hole and insert between guard and right central pulley (step 11).

12. Insert cable between guard and right wing pulley on traveler mechanism support (step 12).

13. Secure cable end to retention plate. Apply tension and tighten bolts (step 13).

14. Position retention plate block on service side left end of cylinder. Be sure that retention plate is at the end of the stroke (step 14).

15. Re-install floor gratings (step 15).

16. Position center of non-service side spray header tubing at 7-1/4 inches, +/ 1/8" (18.4 cm, +/- 3 mm) from ceiling to center (step 16) (See Figure 3-19).

17. Insert cable into right retention block and tighten bolts (step 17).

⚠ **WARNING – PERSONAL IN-JURY AND/OR EQUIPMENT DAMAGE HAZARD: Only fully qualified service personnel should assemble and/or make adjustments to this equipment. Assembly or adjustments done by inexperienced, unqualified personnel could cause personal injury or result in costly damage. Contact your STERIS sales or service representative regarding service options.**

Drive Cable ⑥⑥

Safety Cable ⑥⑦

1/2" [1,2 cm] Appx. Loose

Step 26

Step 7

7-1/4" [18,4 cm]

Step 16

7-1/4" [18,4 cm]

Step 19

Spray Headers
Tubing

Step 17

Adjustment

Loose Cable

Traveler
Mechanism

Detail A

Cable Under
Tension
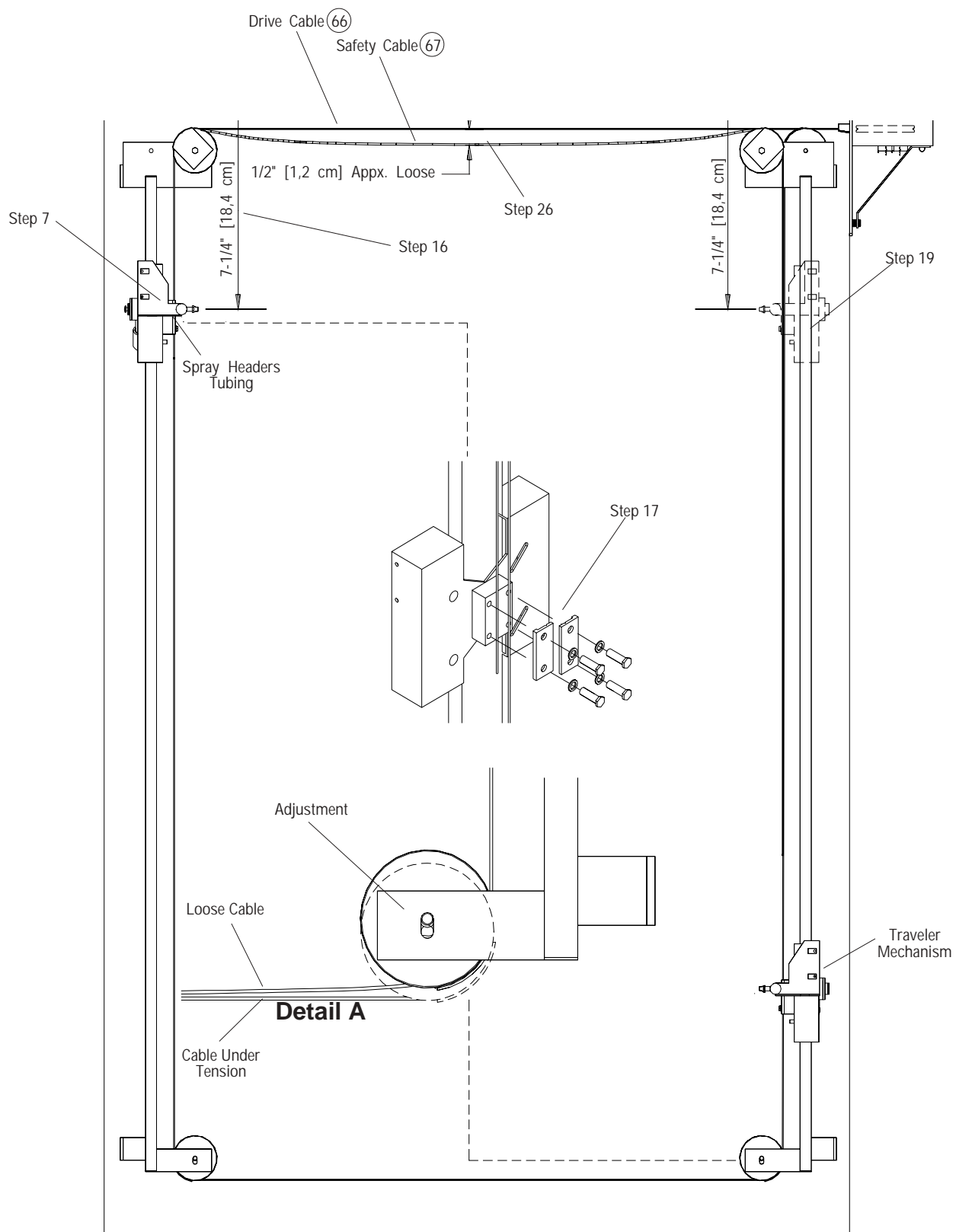
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- From outside washer:

18. Move cylinder cable retention plate to right end (step 18).

- From inside unit, on service side:

19. Lift service side traveler mechanism until spray header tubing is 7-1/4 inches, +/- 1/8" (18.4 cm +/- 3 mm) from ceiling to center of spray nozzle (step 19).

20. Insert cable into left retention plate block and tighten bolts (step 20).

21. From inside of unit, on non-service side, lower spray header to lowest point possible. Verify mechanism doesn't touch lower part of support or pulleys before cylinder has completed a full course (from outside unit). Traveler movement should be stopped by cylinder stroke (step 21).

22. Repeat the same procedure on service side. Verify that cable is not in contact with guards (step 22).

NOTE: To adjust cable tension, untighten one of the lower pulleys, and lower it into slot until snug tension is reached (see Detail A).

NOTE: Do not overtighten cable. Overtightening might damage system components.

3.2.24 Traveler Safety Cable

Figures 3-20 and 3-21

- From inside unit:

23. On traveler mechanism, on service side, insert safety cable (67) between retention plate and mechanism. Leave approximately 1/2 inch (1 cm) of free cable. Tighten plate with bolts (step 19).

24. From inside unit, position traveler halfway. Insert security cable between guard and right pulley on service side (step 17).

25. Run cable across non-service side and insert between guard and left pulley on non-service side (step 25).

26. On non-service side, insert cable between retention plate and mechanism. Tighten retention plate slightly. Pull out cable from center until there is 1/2 inch (1 cm) slack on safety cable. Tighten bolts.

NOTE: Tension should be on traveler cable and not on traveler safety cable.

NOTE: If an adjustment is made to the traveler cable, the traveler security cable must also be adjusted.

Anchoring Hooks

Skid

Stopper Block

Mechanical Core

Transition Ramp

Hook

Clearance:
14' (4 m)
minimum

REF: #122-998-056
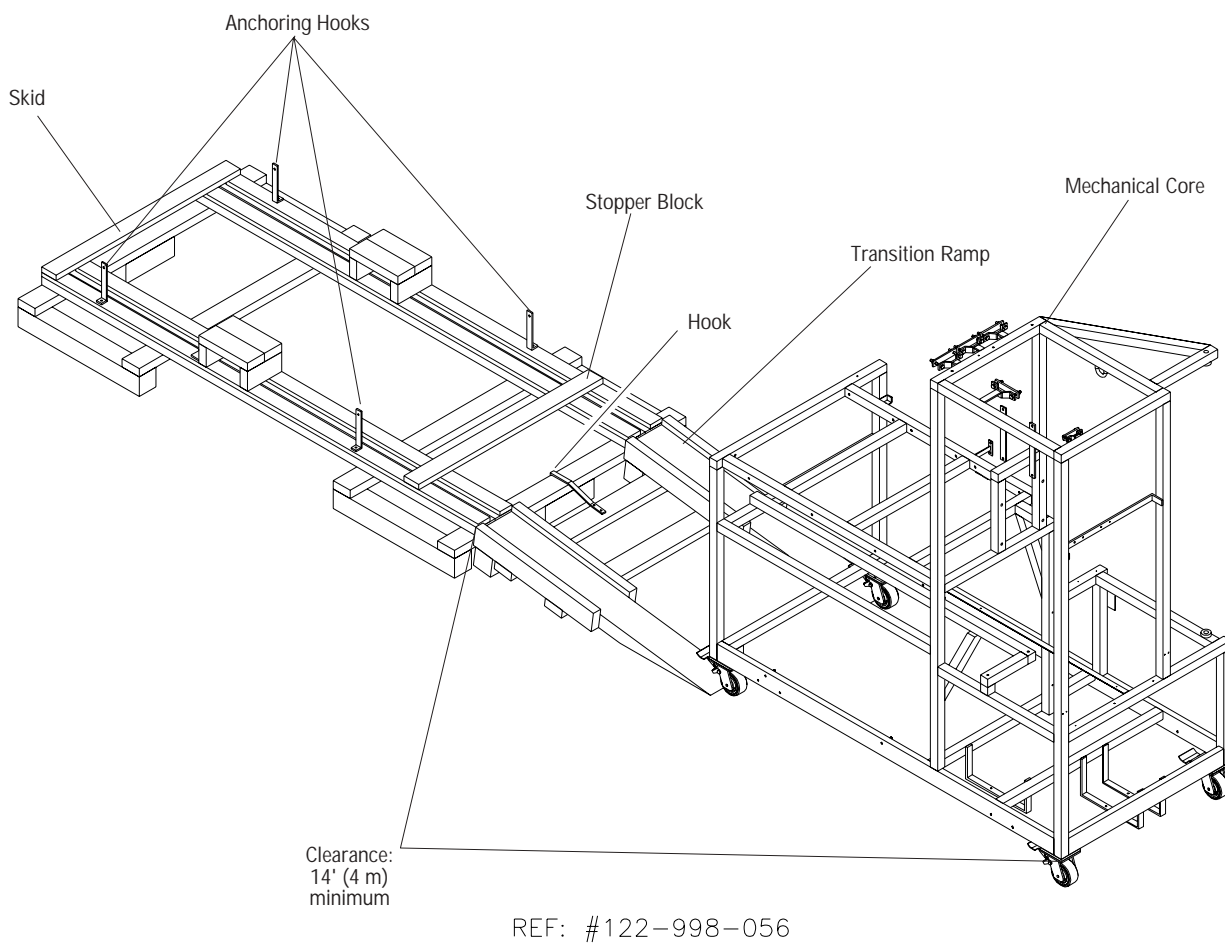
Figure 3-22. Slide Mechanical Core

3.2.25 Crate C

Contents:

- Mechanical Core (65).
- Flexible Rubber Hose (58).
- Flexible Rubber Hose (59).
- Recirculation Piping (60) (if manifolded utensil cart option), or elbow (60) for pneumatic 3-Way Valve.
- Pneumatic Valve Piping (61).
- Fully Drainable Valve (62).
- Drain Discharge Piping (64).
- Leveling legs (109) (Accessory).
- Injection Hose (110) (Automatic Descaler option).
- Hot Water Inlet (111) (if flexible utility hose option).
- Air Hose (112) (if flexible utility hose option).
- Steam Inlet (114) (if flexible utility hose option) .
- Steam Outlet (113) (if flexible utility hose option).
- Cold and Hot Water Inlet Hoses (115) (if flexible utility hose option).

3.3 Move and Remove Skid

3.3.1 Mobile Mechanical Core

⚠ **WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: When moving the unit, use a forklift.**

NOTE: Before moving mobile mechanical core, check center of gravity (see Figure 3-22)

Figure 3-20

1. With mobile mechanical core still mounted on skid, use a forklift to move mechanical core to installation site.

2. Remove stopper block at crate end and middle stopper blocks. Free wheels. Remove anchoring hooks, two on each side of mechanical core.

3. Use transition ramp provided inside crate. Place ramp against unit frame and secure with hook already installed on ramp (see Figure 3-22).

4. Turn wheels at a 90° angle facing ramp and unlock.

5. Position mechanical core close to unit service side as indicated on Equipment Drawing (122-998-061).

17"[432]

49"[1245]

37"[940]

REF.: #920-002-096

Figure 3-23. Mobile Mechanical Core - Center of Gravity

Condensate Port

Detail C

109

59

59

65

59

60

60

62

110

61

58

Detail B

REF.: #920-003-209

Injector

Longest flat side upwards

Detail A

Figure 3-24. Mechanical Core Piping

Name Plate

pH Probe

Drain Piping

REF.: #920-003-460
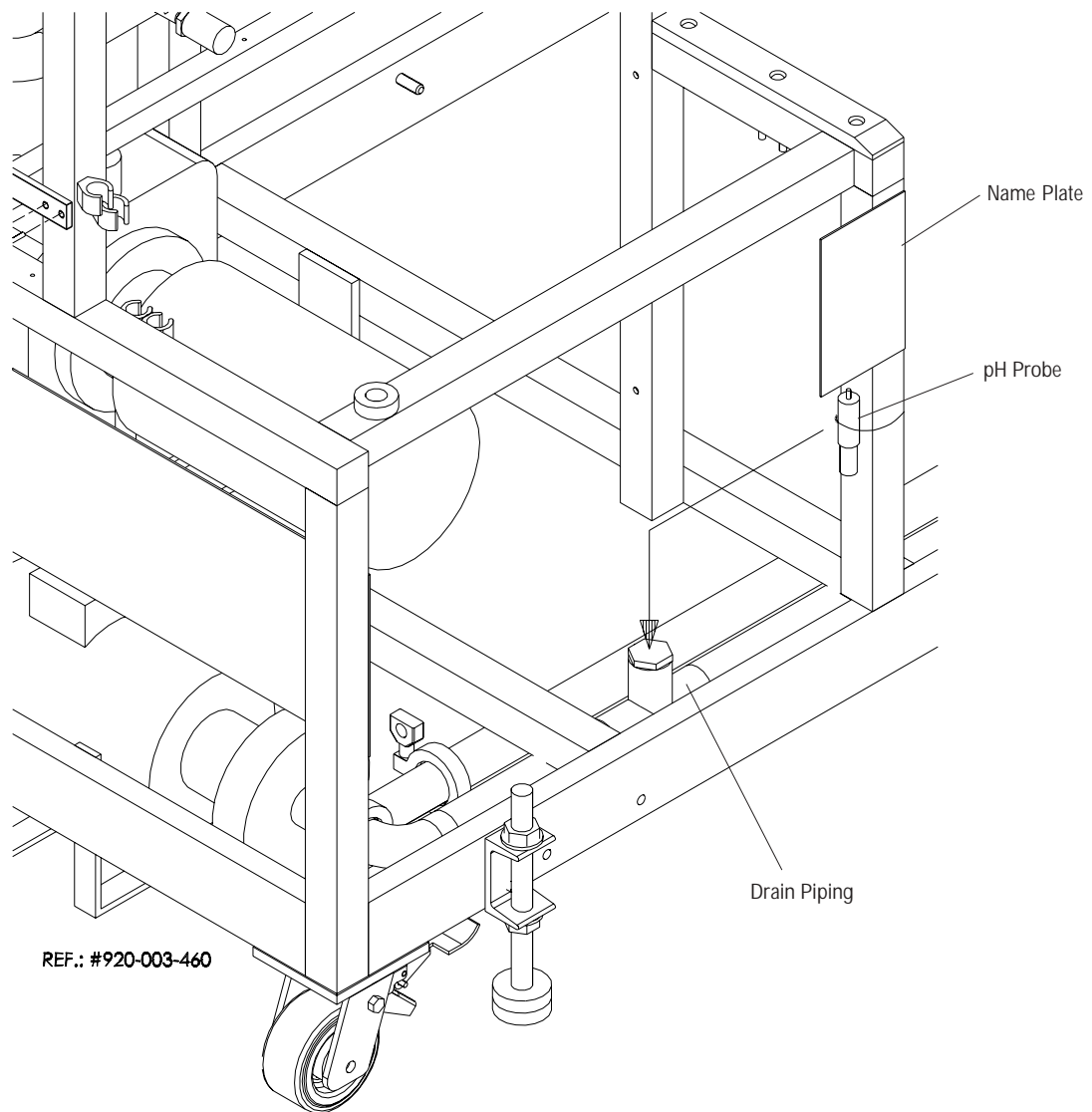
Figure 3-25. pH Probe Location

3.3.2 Mechanical Core

Figure 3-24 and 3-25

1. Bring mechanical core (65) as close to installation site as possible, at approximately 12 inches (305 mm) from unit. Allow sufficient space to make connections between mechanical core and washer.

2. Install seismic anchorage if option applies (see report 122-997-987).

IMPORTANT: Do not remove pH probe attached to mechanical core frame (next to nameplate) until installation is completed and until building water supply valve is opened (see Figure 3-25).

3. Connect suction hose (58) to suction pump inlet using pre-assembled clamps and gaskets.

4. Connect flexible hose (59) to pump outlet using pre-assembled clamps and gaskets.

5. Install 90° elbow (60) on roof piping using pre-assembled clamps and gaskets.

6. Connect flexible hose (61) for utensil cart (Manifold Coupling System Option) to pneumatic valve and other end to sump using pre-assembled quick disconnect clamps and gaskets.

7. Install drain valve (62). Connect service side left valve to the lower drain outlet. Connect suction pump hose end to service side right drain valve. Tighten piping support using 1/4-20 x 3/4 bolts, 1/4 washers, and 1/4 lockwashers. (see Figure 3-24, Detail B).

8. Connect main drain as follows:

   a) If unit is provided with Drain Discharge Cooldown tank (option), connect drain line (64).

   b) Connect flexible hose to condensate port on drain line (64). Connect other end of hose to exhaust fan (option) port to the HVAC (not by STERIS) condensate drain port (see Figures 3-24 and/or 3-25).

9. Move mechanical core as needed to make connections.

10. Connect suction pump piping (58) to washer upper drain connection (see Equipment Drawing (122998-061).

11. Connect flexible hose (59) to unit.

12. Connect suction hose (58) to sump.

13. Connect hose end (62) to valve assembly.

14. Install cold water injection system without tank (Cooldown option) (76) using 5/16-18 x 2-1/2 bolts, 5/16-18 nuts, and 5/16 lockwashers (see Figure 3-24).

15. Remove injector from green hose (110); see Figure 3-24, (if automatic descaler option).

16. From inside washer, insert injector into O-ring. Insert injector through service panel hole.

17. From outside unit, secure injector to panel using nut provided. Make sure longest flat end of injector is facing up when tightening nut (see Figure 3-24, Detail A).

18. Connect hose (110) to injector.
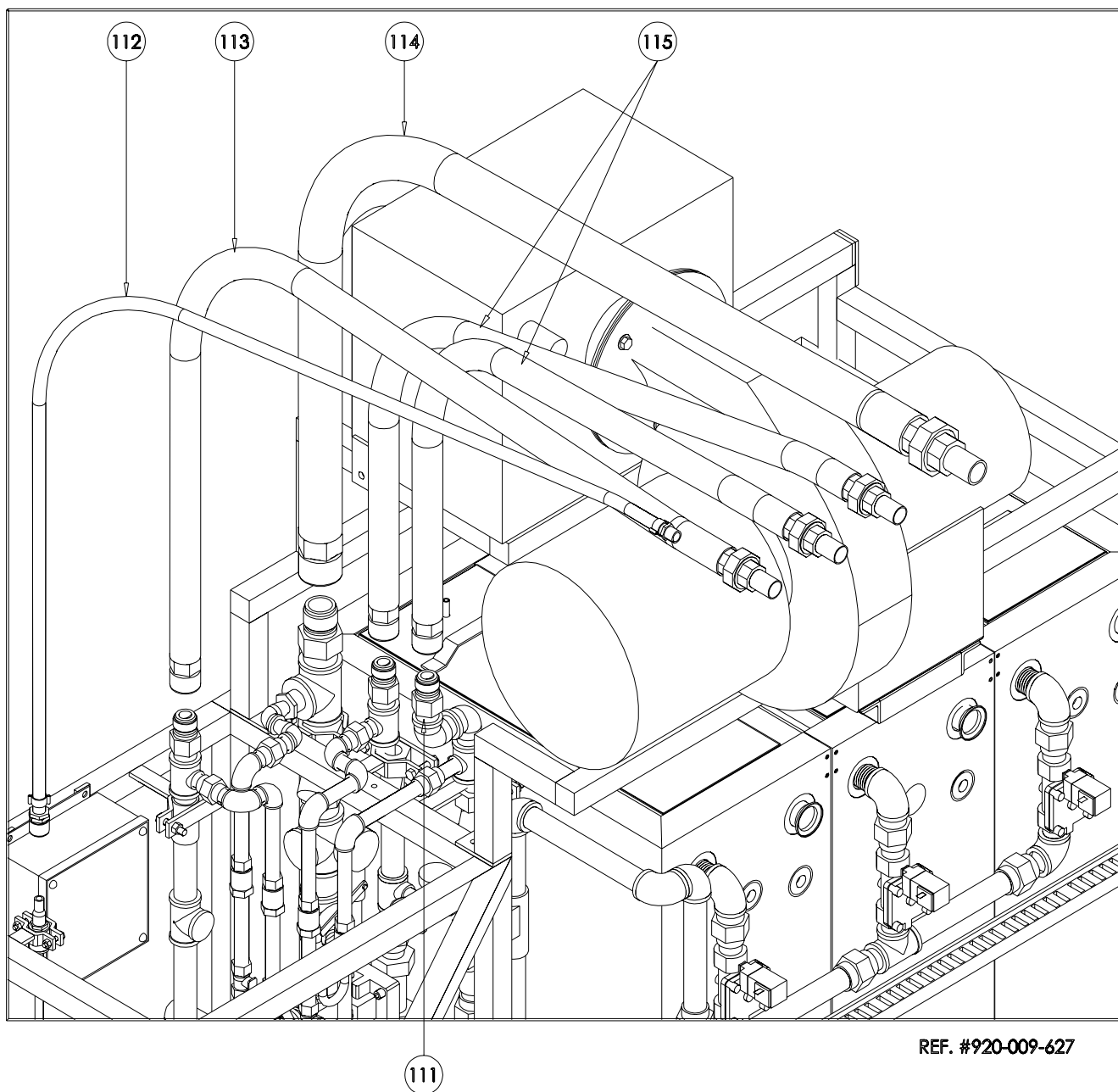
Figure 3-26. Flexible Utility Hoses

3.3.3 Flexible Utility Hoses and Quick-Disconnect System (Option)

Figure 3-25

1. Connect Hot Water Inlet (111) to Tee Hot Water Inlet connection on Mechanical Core. Apply teflon tape on thread.

2. Connect all quick-disconnect clamps from flexible hoses (112, 113, 114, and 115).

3.3.4 Leveling Legs (Accessory)

1. Install leveling legs (109) on Mechanical Core frame using 5/16 x 1-1/2 bolts and 5/16 spring washers (see Figure 3-24, Detail C).

2. Move Mechanical Core to its final position.

3. Place a spirit level along and across frame.

4. Adjust leveling legs as necessary by tightening or untightening adjusting nut.

NOTE: Use an adjustable wrench to lock top of rod on leveling legs when tightening nuts.
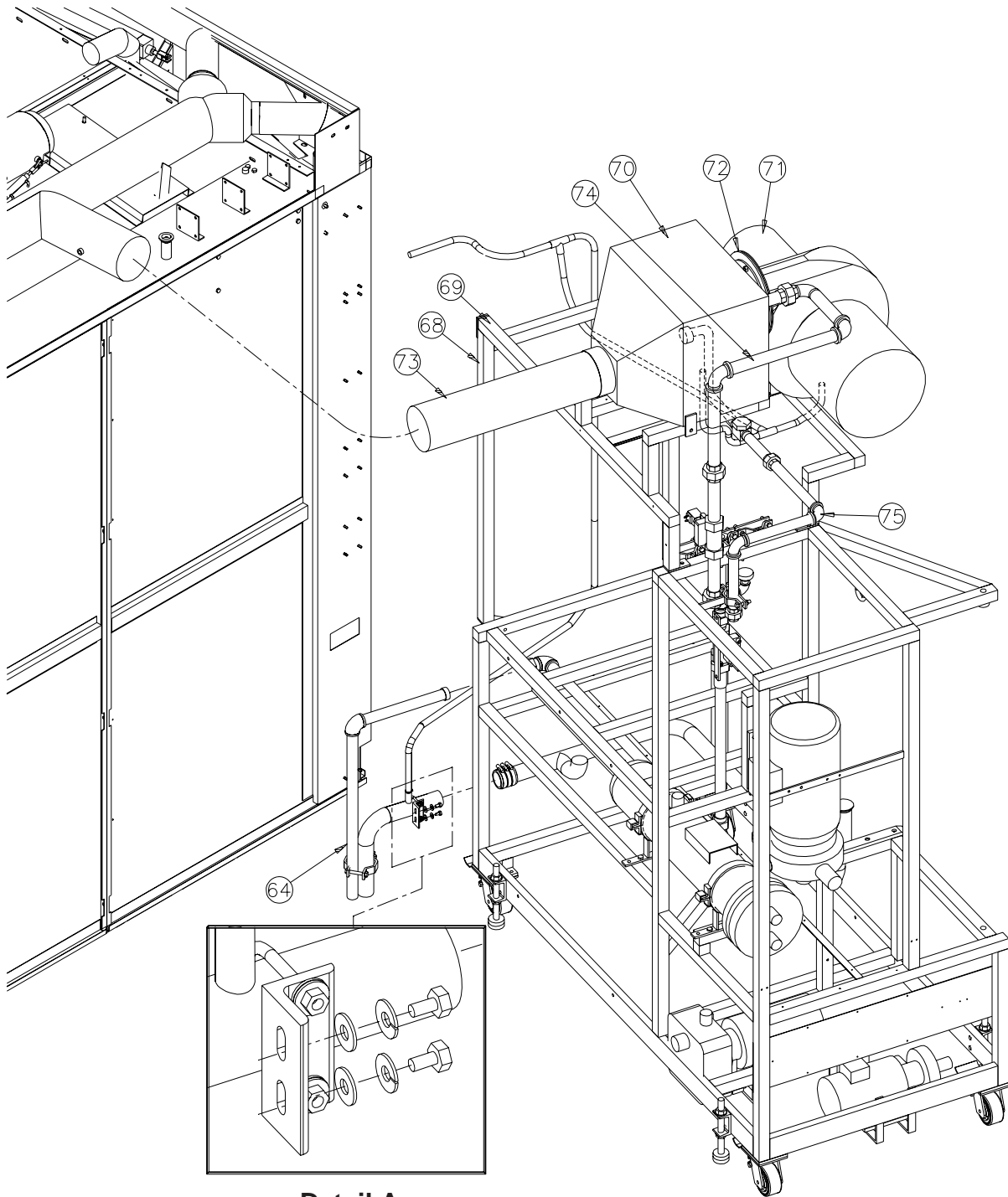
Detail A

REF.: #920-003-172

Figure 3-27. Drying Option

Uncrating/Installation Instructions

Uncrating/Installation Instructions

3.3.5 Crate D

Assembled Units or Disassembled Units. Contents vary depending upon options ordered.

3.3.6 Drying Option Disassembled Units

WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: Only fully qualified service personnel should assemble and/or make adjustments to this equipment. Assembly or adjustments done by inexperienced, unqualified personnel could cause personal injury or result in costly damage. Contact your STERIS sales or service representative regarding service options.

WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: Do not assemble Drying System components (frame, fan and heat exchanger) prior to installation on the mechanical core. Lifting assembled Drying System may result in back injury or equipment damage.

Figure 3-27

IMPORTANT: Two people are required for this task.

1. Install vertical drying system frame support (68) using 5/16-18 x 2-1/2 bolts, 5/16-18 flat washers, lockwashers, and nuts.

2. Install horizontal drying system frame support (69) using 5/16 - 18 x1 bolts, 5/16 flat washers, 5/16 lockwashers, and nuts for top frame.

3. Lift heat exchanger (70) over drying option frame. Secure two vertical posts with two 5/16-18 x 2-1/2 bolts, 5/16 flat washers, 5/16 lockwashers, and 5/16-18 nuts.

4. Spread a 3/8" (11 mm) bead of silicone on silicone gasket (72) to fix gasket to drying fan. Lift drying fan (71) and position next to heat exchanger.

5. Secure fan to heat exchanger with 5/16-18 x 1-1/4 bolts, 5/16 washers, 5/16 lockwashers, and 5/16-18 nuts.

6. Secure assembly to frame using two 3/8-16 x 1 bolts, two 3/8 -16 x 2-1/2 bolts, 3/8 washers, 3/8 lockwashers, and 3/8 -16 nuts.

7. Link heat exchanger to duct with 6 inch (15 cm) flexible hose (73) (about 24 inches long [61 cm]), using 2 collars already installed on hose.

8. Connect drain hoses (64) to heat exchanger box (70) and exhaust fan hose (71) (option) using collars already installed on hose. If there is no exhaust fan, connect on customer ventilation duct (see Equipment Drawing 122998-061).

9. Connect steam inlet union piping (74) to heat exchanger box (remove tape on union).

10. Connect steam return piping (75) to heat exchanger box.

AC5/2
RED

AC5/2
BLUE

REF.: #920-003-281

AC14/4
RED

AC14/4
BLUE
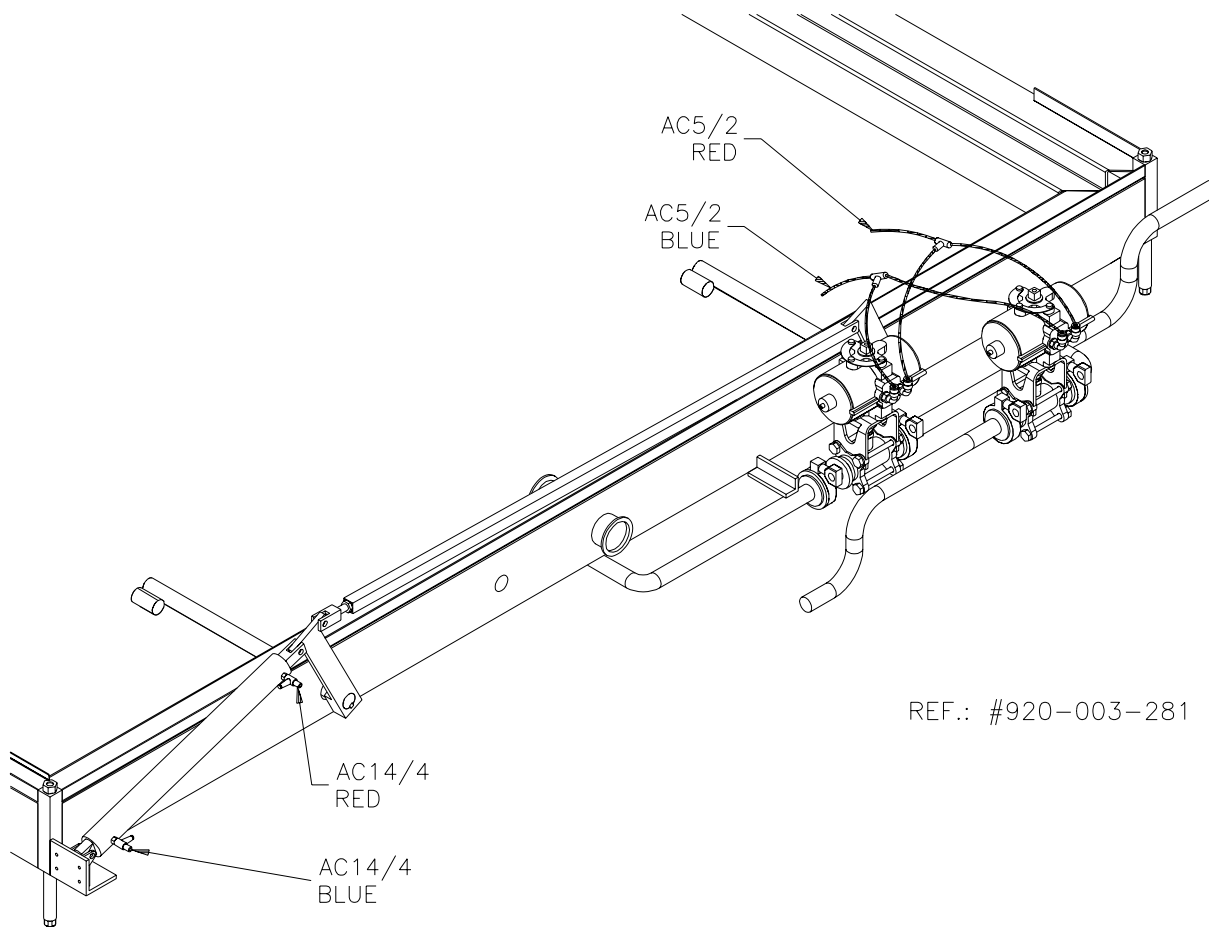
Figure 3-28. Bottom Pneumatic Connections

3.3.7 Pneumatic Connections

NOTE: Pressurized air line supply bundle is sheathed in black flexible conduit.

Connect air line supply as follows, matching numbers as described below :

Connections at Bottom of Washer (Fig.3-28).

1. Make **AC5/2 BLUE** connection.

2. Make **AC5/2 RED** connection.

3. If floor tilt option is present, make **AC14/4 RED** connection for **automatic floor tilt pilot valve**, at bottom of unit.

4. If floor tilt option is present, make **AC14/4 BLUE** connection for **automatic floor tilt pilot valve**, at bottom of unit.

Connections at Top of Washer (Fig.3-29).

TRAVELERS:

1. Make **AC2/2 BLUE** connection for **right traveler cylinder pilot valve**, on top of unit.

2. Make **AC3/2 RED** connection for **left traveler cylinder pilot valve**, on top of unit.

DAMPERS:

3. Make **AC13/4 RED** connection for **damper pilot valve**, on top of unit.

4. Make **AC13/4 BLUE** connection for **damper pilot valve**, on top of unit.

5. Make **AC13/4 RED** connection for **drying damper**, on top of unit (option).

6. Make **AC13/4 BLUE** connection for **drying**, on top of unit (option).

AIR/OIL TANKS:

NOTE: There are two Air/Oil Tanks on a single door unit, and four on a double door unit (one for each door section).

7. Make **AC12/4 RED** connection on **right door close oil tank**, on top of unit (if applicable).

8. Make **AC11/4 BLUE** connection on **right door open oil tank**, on top of unit (if applicable).

9. Make **AC10/4 RED** connection on **left door close oil tank**, on top of unit (if applicable).

10. Make **AC9/4 BLUE** connection on **left door open oil tank**, on top of unit (if applicable).

11. Remove plugs from pneumatic tubing (AC "A", AC "B", AC "C" and AC "D").

12. Make **AC "A"** connection on **left door open cylinder**, on top of unit (if applicable).

13. Make **AC "B"** connection on **left door open cylinder**, on top of unit (if applicable).

14. Make **AC "C"** connection on **right door open cylinder**, on top of unit (if applicable).

> ⚠ **WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: Only fully qualified service personnel should assemble and/or make adjustments to this equipment. Assembly or adjustments done by inexperienced, unqualified personnel could cause personal injury or result in costly damage. Contact your STERIS sales or service representative regarding service options.**

AC10/4
RED

AC9/4
BLUE

AC11/4
BLUE

AC12/4
RED

AC "A"

AC "B"

AC "D"

AC "C"

AC13/4
BLUE

AC13/4
RED

AC2/2
BLUE

AC3/2
RED

REF.: #920−003−271

Figure 3-29. Top of Washer, Pneumatic Connections

15. Make **AC "D"** connection on **right door close cylinder**, on top of unit (if applicable).

16. Completely insert tubing into compression fitting, press as necessary and tighten nut firmly.

17. Open pneumatic valves.

NOTE: To adjust oil level in Air/Oil Tanks, refer to Section 5.

Cylinder
Attachment

Link Attachment
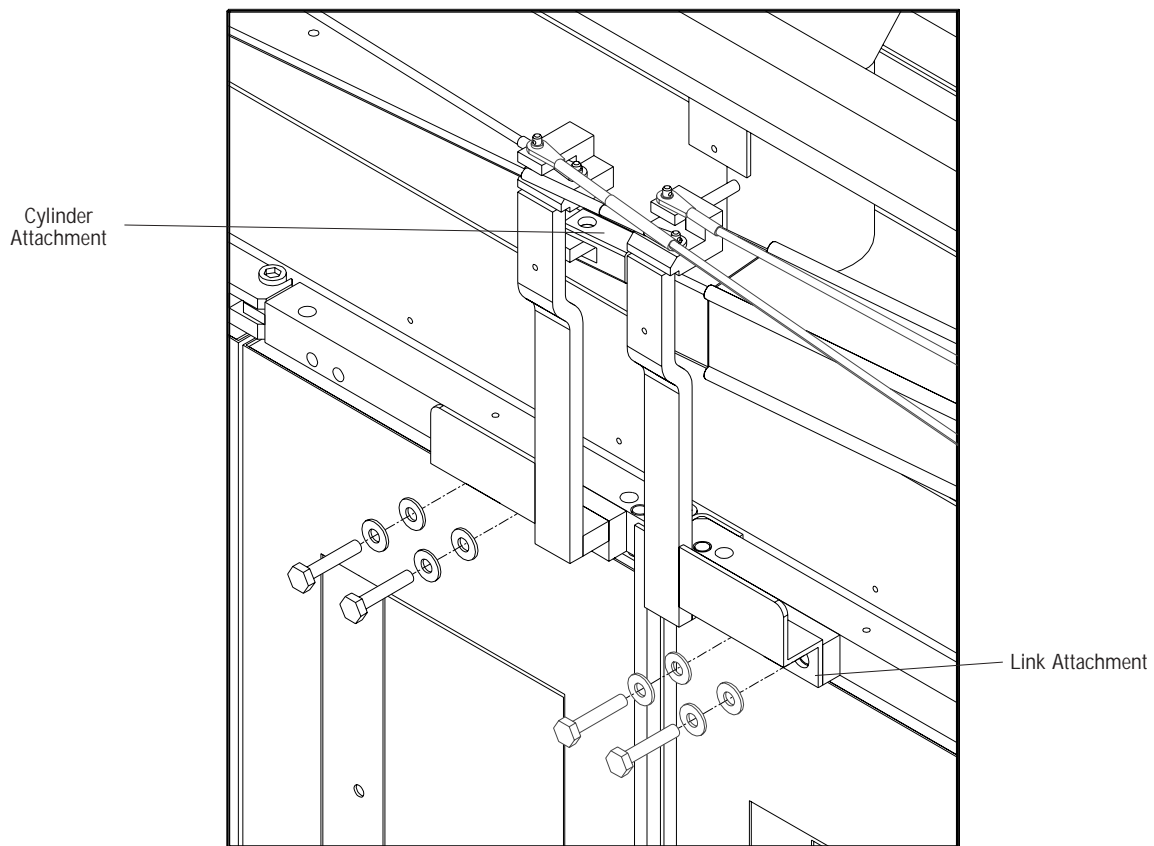
REF.: #920-003-168

Figure 3-30. Door Links

3.3.8 Door Links

WARNING – PERSONAL INJURY HAZARD: Keep hands/fingers away from closing doors to prevent crushing between the two doors.

Figure 3-30

1. Remove ties from door links.

2. Slide doors into closed position.

3. Secure door links to door frames, using blue Loctite on 3/8 -16 x 1-1/2 bolts, 3/8 washers, and 3/8 lockwashers.

4. Tighten bolts.

5. Slide doors into open position and verify that door links and pulleys slide freely.

D RTD — LS8/4

PLL — LS13/4

ESGSS — LS15/4

LS3/4 — EF

IL — RDPSS

LS7/4 — PLR

LDPSS

LS2/4

ESGNSS

LS1/2

DF

PLR

LS0/2

PLL   P70

P92

ESB B

P82

ESB A
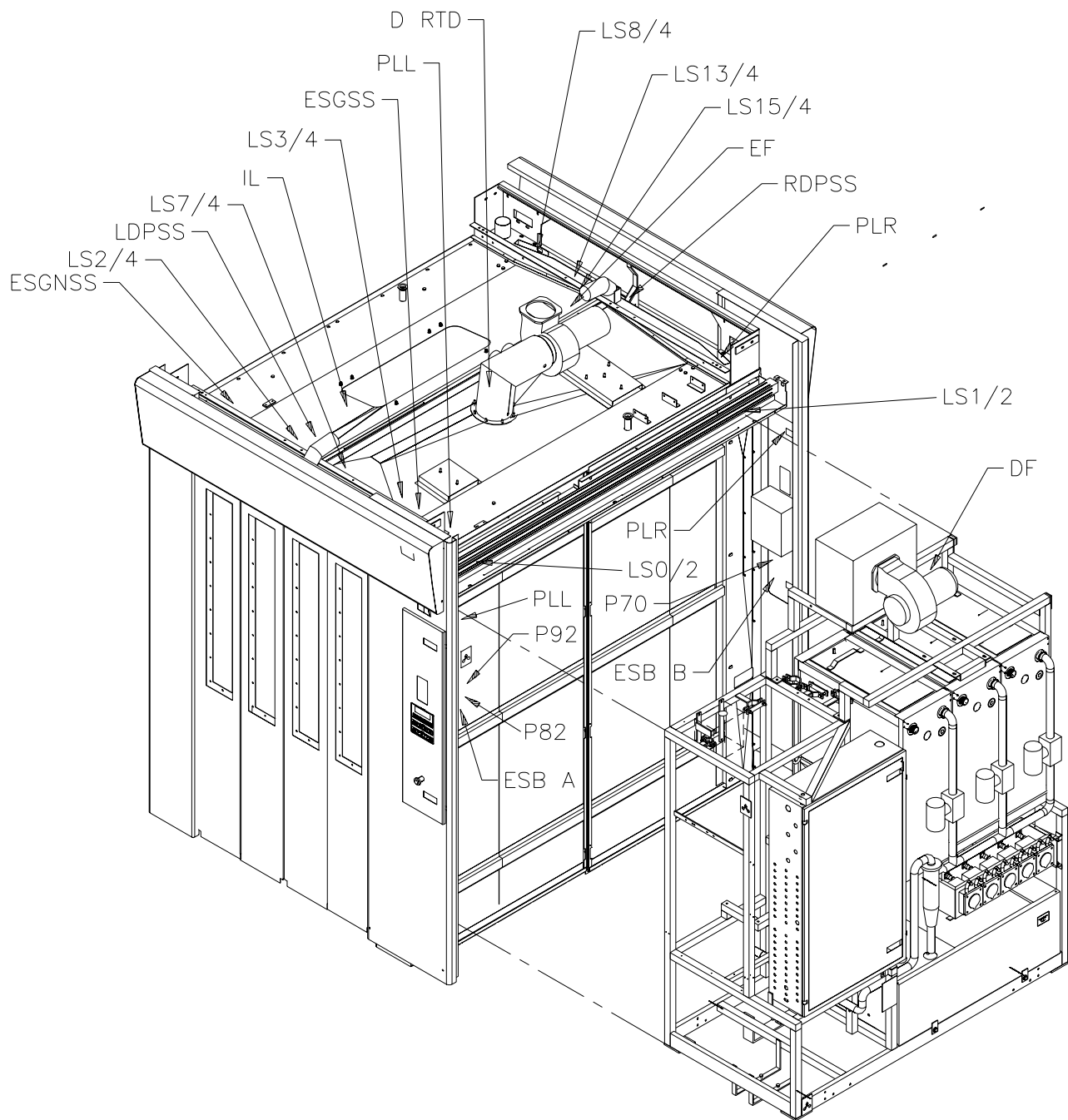
REF: #920-002-097

Figure 3-31. Electrical Connections

3.3.9 Electrical Connections

WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: Only fully qualified service personnel should assemble and/or make adjustments to this equipment. Assembly or adjustments done by inexperienced, unqualified personnel could cause personal injury or result in costly damage. Contact your STERIS sales or service representative regarding service options.

For all electrical connections see Figure 3-31.

NOTE: Wire bundle is sheathed in flexible black conduit.

NOTE: Left and right refer to the position when facing service side.

Make electrical wiring connections as follows, matching numbers as described below:

Connections on Service Side of Washer:

NOTE: Main operator terminal can be located on either left or right side.

1. Make **P92** connection for **main operator terminal supply**, behind main controls (printer side).

2. Make **P82** connection for **main operator terminal communication**, behind main controls (printer side).

3. Make **ESB A** connection for **EMERGENCY STOP Button**, behind main controls (printer side).

4. If double door unit, make **P70** connection for **secondary operator terminal communication**, behind secondary controls (non-operating end terminal).

5. If double door unit, make **ESB B** connection for **EMERGENCY STOP Button**, behind secondary controls (non-printer side).

Connection on Top of Washer, for Left Side:

6. If double door unit or single door unit with doors on left side, make **LS2/4** connection for **left door safety load sensor**, on top of unit.

7. If double door unit or single door unit with doors on left side, make **LDPSS** connection for **left door pump safety switch**, on top of unit.

8. **LS7/4** remains unconnected (not shown).

9. If double door unit or single door unit with doors on left side, make **LS3/4** connection for **left door close sensor**, on top of unit.

10. If double door unit or single door unit with doors on left side, make **PLL** connection for **left indicator light**, on top of control panel.

11. Make **LS0/2** connection for **traveler cylinder left position sensor**, on top of unit.

12. Make **ESGNSS** connection for **emergency stop guard rail,** non-service side, on top of unit.

13. Make **ESGSS** connection for **emergency stop guard rail,** service side, on top of unit.

Connections on Top of Unit, for Right Side:

14. If double door unit or single door unit with doors on right side, make **LS8/4** connection for **right door close sensor**, on top of unit.

15. **LS13/4** remains unconnected (not shown).

16. If double door unit or single door unit with doors on right side, make **LS15/4** connection for **right door safety load sensor**, on top of unit.

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17. If double door unit or single door unit with doors on right side, make **RDPSS** connection for **right door pump safety switch**, on top of unit.

18. If double door unit or single door unit with doors on right side, make **PLR** connection for **right indicator light**, on top of control panel.

19. Make **LS1/2** connection for **traveler cylinder right position sensor**, on top of unit.

Connections in middle top of unit:

20. Make **IL** connection for **interior light**, on top of unit.

21. If exhaust fan option is present, make **EF** connection, for **exhaust fan** system on top of unit. (Match wire numbers inside motor electrical box.)

22. If drying option is present, make **D RTD** connection, for **drying RTD** on top of unit.

Connections on top of mobile mechanical core:

23. If drying option is present, make **DF** connection, for **drying system** on top of mobile mechanical core. (Match wire numbers inside motor electrical box.)

Hot Water Connection

Cold Water Connection

Steam Supply Connection

Steam Return

Electrical Connection

Air Connection

REF.: #920-003-218
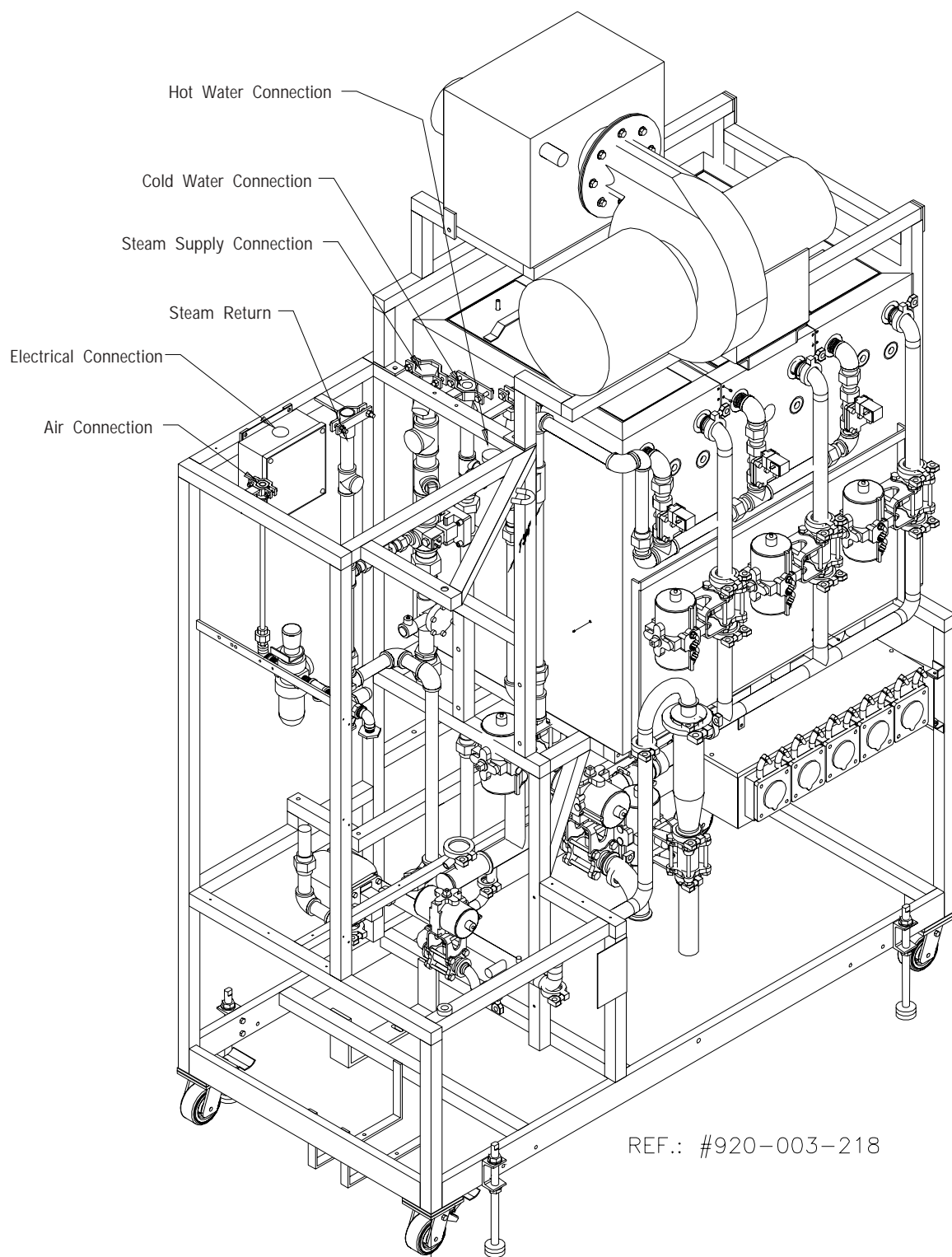
Figure 3-32. Supply Line Connections

3.4 Connect Utilities

WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: Only fully qualified service personnel should assemble and/or make adjustments to this equipment. Assembly or adjustments done by inexperienced, unqualified personnel could cause personal injury or result in costly damage. Contact your STERIS sales or service representative regarding service options.

Figure 3-32

Connect the following supply lines to the unit (refer to Equipment Drawing for proper location):

- **HOT WATER** - Blow out hot water supply line to remove chips, scale, etc. Connect line to unit connection, accessible from top of mobile mechanical core.

NOTE: Water is hot; run water line to a safe sink or drain.

- **COLD WATER** (required on models equipped with a Drain Discharge Cooldown System or a pH Neutralizer System) - Blow out the building cold water supply line to remove chips, scale, etc. Connect line to unit connection, accessible from top of mobile mechanical core.

- **STEAM** - Blow out building steam supply line to remove chips, scale, etc. Connect line to unit connection, accessible from top of mobile mechanical core.

NOTE: Live steam; run steam line to a safe drain.

- **CONDENSATE RETURN** - Connect building condensate return line to unit connection, accessible from top of mobile mechanical core. Condensate return must be vented and non-pressurized.

- **DRAIN** - Connect building waste line to unit drain line, accessible from bottom of mobile mechanical core.

- **VENT** - Connect building ventilation system to unit vent connection or to Exhaust Fan (if option is present), accessible from top of unit.

- **COMPRESSED AIR** - Connect building supply line to unit connection, accessible from top of mobile mechanical core.

- **ELECTRIC** - Connect building electrical supply to unit electrical supply box, accessible from top of mobile mechanical core. Tighten electrical connections.

2. Open building supply valves and check for leaks. Correct if necessary.
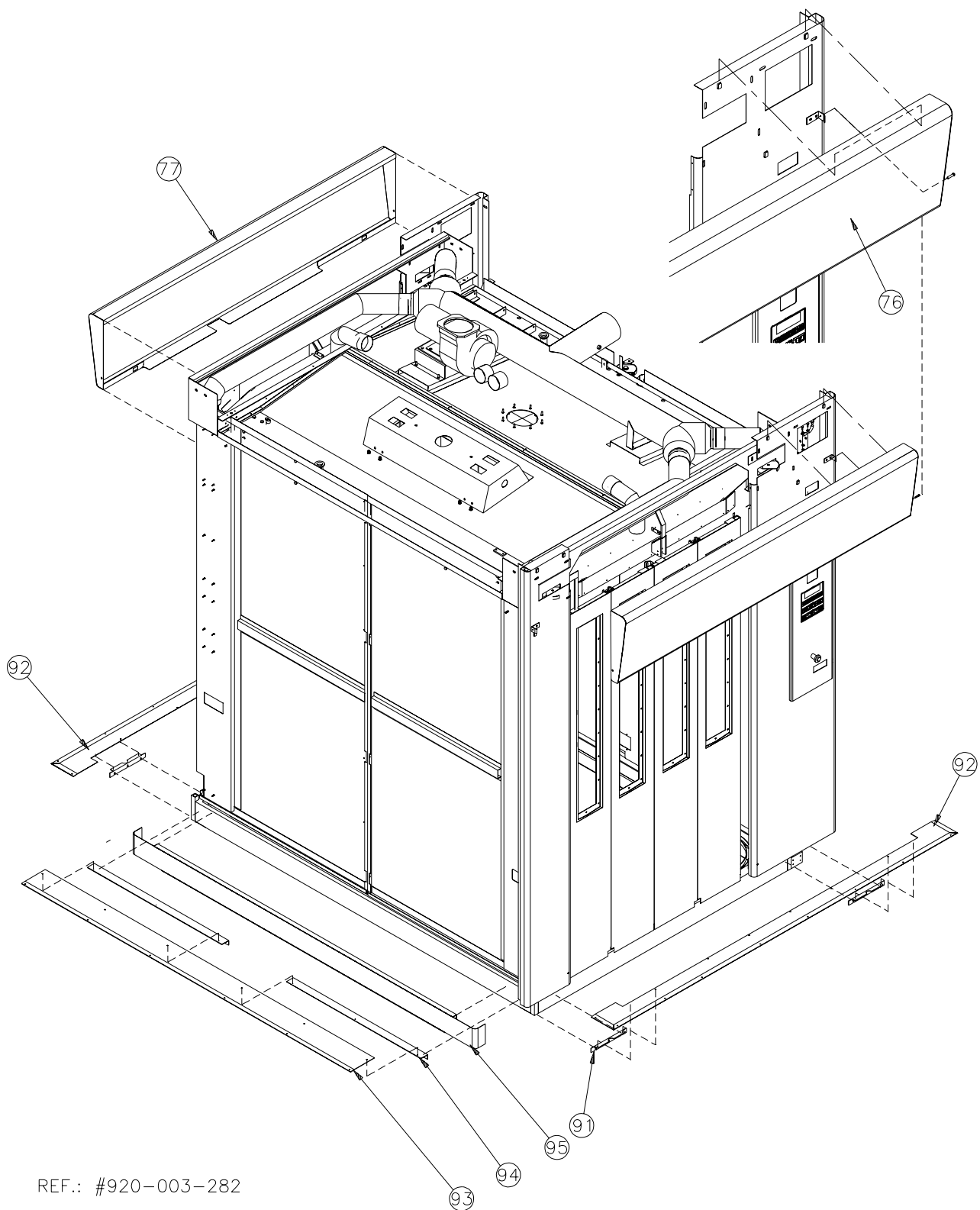
Figure 3-33. Service Panels

REF.: #920-003-282

3.5 Service Panels

⚠ **CAUTION – POSSIBLE EQUIPMENT DAMAGE: After utilities are connected to washer, slowly remove the protective adhesive paper from the exterior cabinet panels to reduce the risk of static discharge.**

1. Install Front Service panels (76, 77) as shown on Figure 3-33.

2. Install Front Service panels on exterior of service-side walls.

3. Secure into position using 10-32 x 1/4 screws.

4. Install transition supports (91, 94) level with floor using 10-32 x 3/8 screws if unit is pit mounted.

5. Install transition plates (92, 93) using 10-32 x 3/8 screws if unit is pit mounted.

6. Install protection panel (95) using 10-32 x 3/8 screws if unit is floor mounted.

7. Remove all white protective adhesive paper from the unit cabinet panels. Slowly peel paper away from stainless steel to reduce level of static discharge.
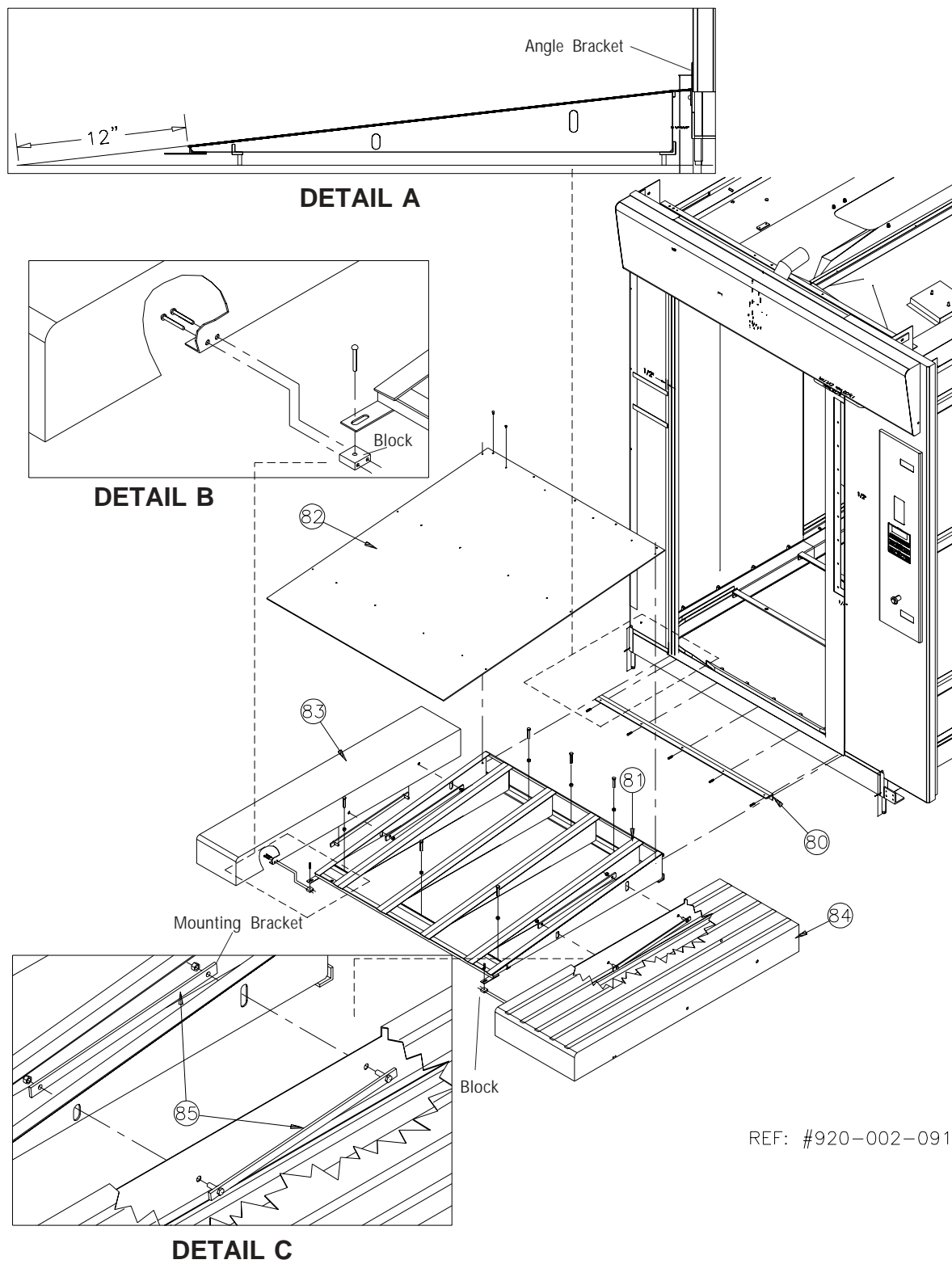
DETAIL A

DETAIL B

DETAIL C

Figure 3-34. Ramp (Accessory)

3.6 Ramp (Accessory) (All Units)

Figure 3-34

1. Bolt angle bracket (80) to sump, below door sill. Use five truss head screws (10 - 32 x 1/2).

2. Place ramp base under angle bracket (see Detail A).

3. Install ramp base (81). Level ramp base to angle bracket and floor (see Detail A). Use six bolts 3/8 - 16 x 2 and six nuts 3/8-16 provided on both ends to adjust ramp base height.

4. Bolt blocks on ramp sides (83, 84). One on each side of Ramp. Use four 10 - 32 x 1/2 truss head screws and two 1/4- 20 x 1/2 bolts (see Detail B).

5. Temporarily tape side mounting bracket (85) on each side guard (83 and 84) to hold in place.

6. Fix side mounting brackets (85) from side guards to ramp. Use four 3/8 - 16 nuts. Non-slip guard should be placed on control panel side.

7. Place aluminum plate (82) on base. Bolt aluminum plate to mounting bracket and to ramp base using 10 - 32 x 1/2 truss head screws provided.

8. Repeat steps 1 through 7 to install second ramp on a double door unit.

Detail C

101

102

100

REF.: #920-003-173

Detail A

Detail B
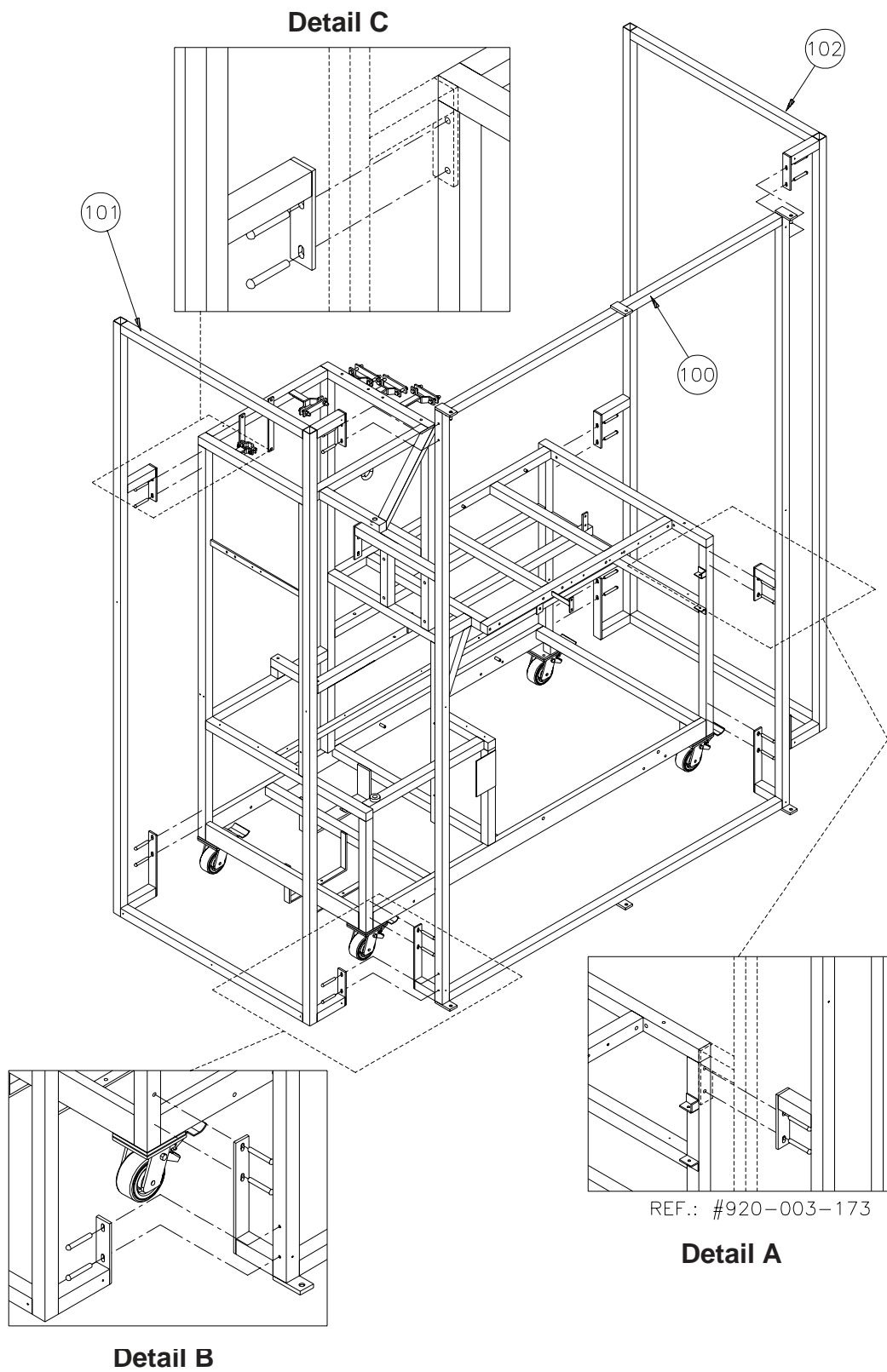
Figure 3-35. Service Access Panels

3.7 Service Access Panels

NOTE: Do not remove white protective adhesive paper from service and door panels until complete installation.

IMPORTANT: two people may be required to assemble Service Access Panels.

1. To install door frame (100), align middle door frame bracket flush with Mechanical Core frame (see Figure 3-35, Detail A) and lower door frame brackets. Mark holes on Mechanical Core frame.

2. Remove door frame. Drill Ø1/4 and tap 5/16 -18 into Mechanical Core Frame. Re-install and fix door frame on Mechanical Core using 5/16-18 x 3/4 bolts.

3. Fix bottom of side frame (101) to bottom and top of door frame (100); (see Detail B). Mark holes on Mechanical Core side frame (see Detail C).

4. Remove side frame. Drill Ø1/4 and tap 5/16 -18 into Mechanical Core frame. Re-install side frame on Mechanical Core using 5/16-18 x 3/4 bolts.

5. Repeat steps 3 and 4 to insall side frame (102).

6. Make sure Mechanical Core ends are flush with washer.

7. Lift slightly and slide extension panel (107) on service side panel (103) to adjust distance with washer.

8. Mark holes on corner control panel. Remove side panel (107).

9. Drill Ø 5/32 and tap 10-32 into corner control panel. Attach extension panel (107) using 10-32 x 1/2 screws.

10. Repeat same procedure on opposite side for extension side panel (108) on service panel (104).

11. Install service door panels (105 and 106) on frame (100). Insert doors into top rods (see Figure 3-36, Details A and B). Use 3/8 - 16 x 1-1/2 bolts and 3/8-16 locknuts on door bottom.

12. Install ground cables inside side top door holes using 8-32 x 3/8 screws (see Figure 3-36, Detail C).

Detail C

Detail A

108

104

102

107

103

101

100

106

105

REF.:#920-003-457

Detail A

Figure 3-36. Service Access Panels

3.8 Cleanup

1. Remove all white protective adhesive paper found on panels, door(s) and inside chamber with a small amount of non-flammable cleaning product. Keep solvent away from all painted surfaces or damage may result.

NOTE: After removing protective paper from doors, make sure outside glass fixture is firmly clipped over glass.

2. Remove all white assembling stickers from unit with a small amount of non-flammable cleaning product. Keep solvent away from all painted surfaces or damage may result.

3. Inspect unit and work area to be sure all material used during installation have been removed.

4. Remove three floor grids and clean sump thoroughly. Tie wraps, screws or other items could enter and damage or jam suction pump.

THIS COMPLETES THE INSTALLATION. Before operating equipment, Installation Checklist (Section 4) and Operational Test (Section 5) should be conducted by a qualified service technician.

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Installation checklist must be completed after the washer is installed and prior to performing the operational test to assure complete and correct installation.

NOTE: Contact your STERIS representative to schedule a technician to test your installation and demonstrate proper equipment operation.

❏ Shutoff valves (not by STERIS), for maintenance purposes and capable of being locked in OFF position only, installed on steam, air, and water lines and in compliance with local occupational health and safety regulations, as well as electric and plumbing codes.

❏ Disconnect switches (not by STERIS), for maintenance purposes and capable of being locked in OFF position only, installed in electrical supply lines near the unit and in compliance with local occupational health and safety regulations, as well as electric and plumbing codes. Disconnect switches must bear the identification of the equipment to which they are connected.

NOTE: If unit is installed next to other equipment, shutoff valves and disconnect switches should be located so that service can be shut off to one piece of equipment at a time.

❏ Washer positioned, as shown on Equipment Drawing, with required clearance space and in relation to building supply lines.

❏ Washer is level. Use leveling legs if necessary.

❏ Building cold water line supplies water to unit as specified on Equipment Drawing (required only if Drain Discharge Cool Down System, pH Neutralizing System or Cold Water Injection is present).

❏ Building hot water line supplies water to unit as specified on Equipment Drawing.

❏ Building steam line provides steam to unit as specified on Equipment Drawing.

❏ Building condensate return line is connected to washer as specified on Equipment Drawing.

❏ Building air line supplies air to unit as specified on Equipment Drawing.

❏ Building waste line is connected to washer as specified on Equipment Drawing.

❏ Building ventilation system is connected to washer as specified on Equipment Drawing.

❏ Electrical supply for unit is as specified on Equipment Drawing.

❏ Floor surrounding unit has nonslip surface.

❏ Piping connections between washer and mobile mechanical core are as specified in Section 3.

❏ Electrical connections between washer and mobile mechanical core are as specified in Section 3.

❏ Air line connections between washer and mobile mechanical core are as specified in Section 3.

❏ If present, drying option connections between washer and mobile mechanical core are as specified in Section 3.

❏ If present, ramp is correctly attached to washer as specified in Section 3.

IMPORTANT: After a few weeks of operation, inspect units for leaks. Re-tighten all clamps and connections.

⚠ **WARNING – PERSONAL INJURY HAZARD: To open doors from inside wash chamber, press Emergency Safety Guard Rails. Washer operation will automatically stop. Then, push firmly between door panels using shoulder and upper arm, applying upper body force. Do not push between the doors, but between door panels.**

⚠ **WARNING – PERSONAL INJURY AND/OR EQUIP-MENT DAMAGE HAZARD: To test or demonstrate Emergency Exit Safety Doors, first press Emergency Stop Pushbutton) located under control) or Emergency Safety Guard Rails (inside wash chamber) to turn power OFF. If power is still on while adjusting or servicing doors, the Photoelectric Sensor will detect the movement of the door panels and doors will open automatically.**

Test procedures included in this section should be performed by a STERIS trained service technician prior to normal operation of the washer.

NOTE: Chamber doors should still be open; if not, manually open doors.

1. Verify that wash chamber is empty and all packing material (tie wraps) has been removed.

2. Verify that debris screen is correctly positioned in wash chamber sump.

3. Make sure both clamps are properly secured over suction plate hose.

4. Verify Emergency Stop Guard Rails, inside wash chamber, are pulled up.

5. Make sure Emergency Stop Pushbutton(s) are pulled out (see Figure 3-2 for location).

5.1 Installation of pH Probe

WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: Assembly or adjustments done by inexperienced, unqualified personnel could cause personal injury or result in costly damage. Contact your STERIS sales or service representative regarding service options.

CAUTION – POSSIBLE EQUIPMENT DAMAGE: Handle pH Probe with care; pH Probe is fragile. Hitting or rubbing pH probe may damage probe sensor.

Figure 5-1.

1. Remove tape from Neutralizing Pump inlet piping.

2. Remove polystyrene wrap from pH Probe.

3. Remove gel-filled cap from pH Probe.

4. Carefully insert pH Probe into Neutralizing Suction Pump inlet piping. Do not overtighten pH Probe.

5. Open water, steam and air building supply valves.

REF.: #920-003-460

Remove pH Probe

Neutralizing Pump Inlet Piping
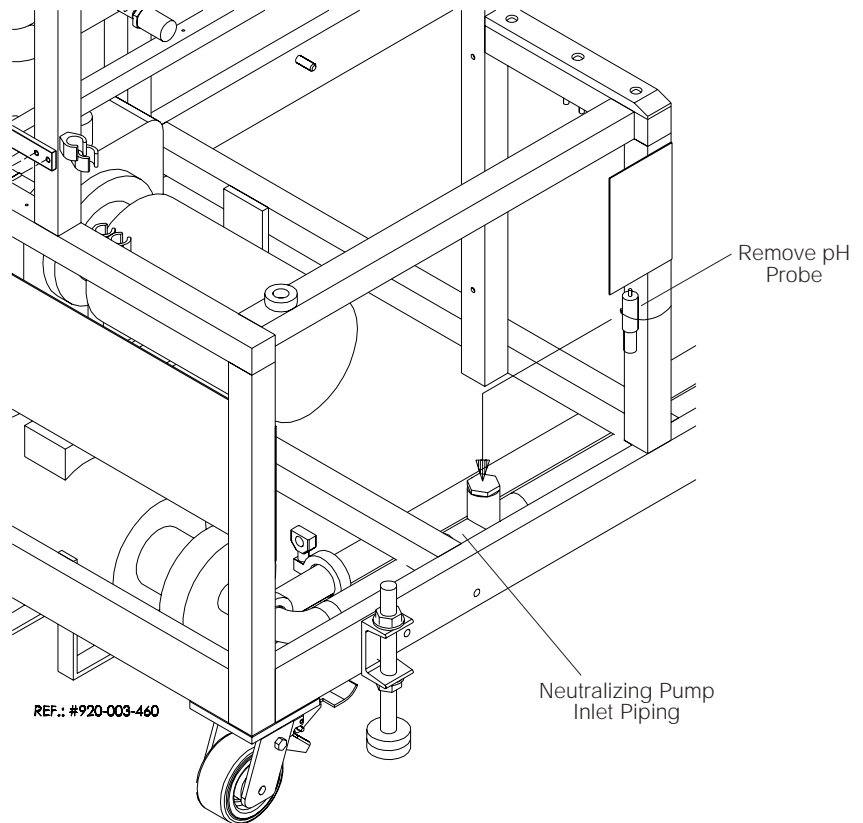
Figure 5-1. pH Probe

5.2 How to Enter Factory Set-Up Mode
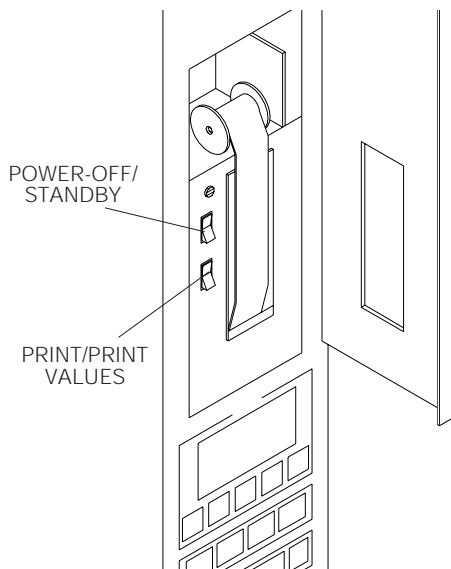
Figure 5-2. Control Panel and Printer

POWER-OFF/ STANDBY

PRINT/PRINT VALUES

DOOR CLOSE

DOOR OPEN

DOOR CLOSE

DOOR OPEN

CHANGE VALUES

SAVE VALUES

VALUE ▲▼

CHANGE VALUES

If main control and remote control panels have been interchanged from factory location, enter Factory Set-Up Mode to configurate control.

1. Position electrical disconnect switch to **ON**.

2. Set **POWER-OFF/STANDBY** switch, located behind printer door, to **POWER** (see Figure 5-2) and immediately press and hold **PRINT** on **PRINT/PRINT VALUES** Printer Function Switch.

NOTE: Top portion of PRINT/PRINT VALUES switch must be pressed immediately after POWER has been pressed, otherwise washer will automatically enter Automatic Mode.

3. Display shows:

```
┌──────────── STATUS ────────────┐
│      STERIS                     │
│      BASIL 9500                 │
└─────────────────────────────────┘
```

Then:

```
┌──────────── STATUS ────────────┐
│   ENTER SERVICE MODE            │
│   ACCESS CODE: XXXX             │
└─────────────────────────────────┘
```
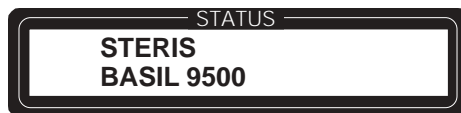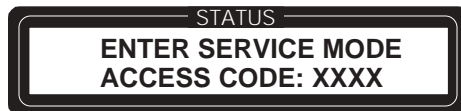
4. Enter Factory Set-Up Access code:

   a) Press **DOOR CLOSE** touch pad.

   b) Press **DOOR OPEN** touch pad.

   c) Press **DOOR CLOSE** touch pad.

   d) Press **DOOR OPEN** touch pad.

5. Press **CHANGE VALUES** touch pad (CVTP).

6. Answer **NO** to Delete Configuration question.

7. Press **SAVE VALUES** touch pad (SVTP) to review existing configuration.

8. Answer **YES** to all questions that will appear on display (check unit options), until you arrive to:

```
┌──────────── STATUS ────────────┐
│   LOAD DOOR SIDE                │
│   LEFT                          │
└─────────────────────────────────┘
```

9. Press **VALUE** (up or down) touchpad to move to RIGHT.

NOTE: You should stand facing Mechanical Core Service Side to determine left and right side.

10. Press **CHANGE VALUES** touch pad to confirm.

11. Display shows:

```
┌─────────── STATUS ───────────┐
│  PRINTER CONTROL SIDE        │
│  LOAD                        │
└──────────────────────────────┘
```

12. Press **VALUE** touchpad to move to UNLOAD.

NOTE: You should stand facing Mechanical Core Service Side to determine left and right side. Check Equipment Drawing to determine workflow operation.

13. Press **CHANGE VALUES** (CVTP) until the end of menu.

14. Press **SAVE VALUES** to answer NO to Review Configuration.

15. Press **CHANGE VALUES** to print new configuration. Printer prints:

⚠ **WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: Only fully qualified service personnel sould assemble and/or make adjustments to this equipment. Assembly or adjustments done by inexperienced unqualified personnel could cause personal injury or result in costly damage. Contact your STERIS sales representative regarding service options.**

Values to configurate when exchanging control panels

```
****************************
        FACTORY SETUP
****************************
11:35:04P          0/12/20
UNIT HAS BEEN
RECONFIGURED
11:35:36p          0/12/20
===========================
UNIT CONFIGURATION
11:35:40P          0/12/20
===========================

DOUBLE DOOR UNIT
   YES
DRYING PACKAGE
   YES
DRAIN  COOLDOWN
   COOLDOWN TANK
FLOOR TILTING
   YES
FINAL R. WATER TEMP. =
   185.0
LOAD  DOOR SIDE
   LEFT
PRINTER CONTROL SIDE
   LOAD
S/N 3608100003
CYCLE CNT   =00000030
ADDITIONAL WASH TANK
   YES
pH NEUTRALIZATION
   NO
MANIFOLD COUPLING
   YES
AUTOMATIC DESCALER
   YES

===========================
```

Figure 5-3. Typical Configuration Printout

16. Display returns to:

```
┌─────────── STATUS ───────────┐
│  SERVICE MODE                │
│  BASIL 9500                  │
└──────────────────────────────┘
```

then:

```
┌─────────── STATUS ───────────┐
│ │I/O TESTS│    TOUCHPADS     │
│  DISPLAYS     PRINTER        │
└──────────────────────────────┘
```
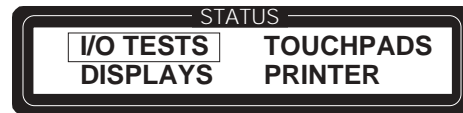
▢ *indicates flashing position.*

5.2.1 How to Verify Indicator Lights

CYCLE START

17. Press **CYCLE START** to iniciate verification. Display shows:

```
┌─────────── STATUS ───────────┐
│ │DIG.OUT│       DIG. IN      │
│  ANALOG IN                   │
└──────────────────────────────┘
```
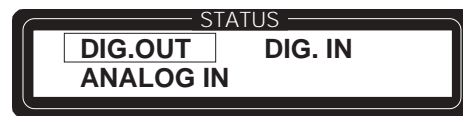
▢ *indicates flashing position.*

CYCLE START

18. Press **CYCLE START** again to go to first I/O menu:

```
┌─────────── STATUS ───────────┐
│  01   pp  sp  tl  tr  ff  fd │
│  mf   ef  df  np  rl  gl  rr │
└──────────────────────────────┘
```
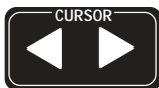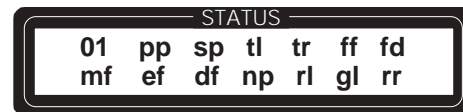
CURSOR **VALUE**

19. Use **CURSOR** arrows (right or left) to select **rl** output, press **VALUE** (up) to activate output (RL). Verify that right red light is on. Press **VALUE** again to deactivate output.

NOTE: When output is selected, letters will change from lower case to capital letters. When de-activated, letters will change from capitals to lower case.

NOTE: Missing options are represented by two dashes: - -.
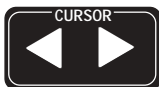
CURSOR **VALUE**

20. Use **CURSOR** arrows to select **gl** output, press **VALUE** (up) to activate output (GL). Verify that left green light is on. Press **VALUE** again to deactivate output.
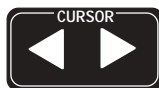
CURSOR **VALUE**

21. Use **CURSOR** arrows to select **rr** output, press **VALUE** (up) to activate output (RR). Verify that right red light is on. Press **VALUE** again to deactivate output.

22. Press **SELECT CYCLE** twice to go to second outputs menu:

```
┌─────────── STATUS ───────────┐
│  02   gr  lt  p1  p3  p4  p5 │
│  f1   f2  f3  cw  wh  dh  l1 │
└──────────────────────────────┘
```
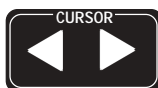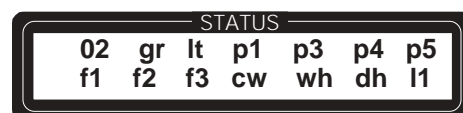
CURSOR

23. Use **CURSOR** arrows to select **gr** output, press **VALUE** (up) to activate output (GR). Verify that right green light is on. Press **VALUE** again to deactivate output.

IMPORTANT: In case indicator lights do not correspond to correct side configuration, verify that PLL cable is on the right side and that PLR cable is on left side.

5-5

5.2.2 How to Verify Door Configuration

SELECT CYCLE

24. Press **SELECT CYCLE** twice to go to third outputs menu:

```
┌──────────── STATUS ────────────┐
│  03  o1  l2  o2  l3  o3  cd     │
│  pd  sd  cl  ol  cr  or  dp     │
└────────────────────────────────┘
```
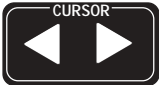
CURSOR ◄ ► **VALUE** ▲ ▼

25. Use **CURSOR** arrows to select **ol** output, press **VALUE** (up) to activate output (OL). Verify that doors on left side open. Press **VALUE** again to deactivate output.
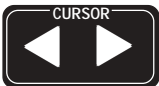
CURSOR ◄ ► **VALUE** ▲ ▼

26. Use **CURSOR** arrows to select **cl** output, press **VALUE** (up) to activate output (CL). Verify that doors on left side close.
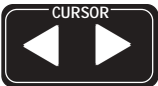
CURSOR ◄ ► **VALUE** ▲ ▼

27. Use **CURSOR** arrows to select **or** output, press **VALUE** (up) to activate output (OR). Verify that doors on right side open. Press **VALUE** again to deactivate output.
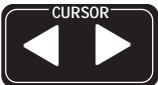
CURSOR ◄ ► **VALUE** ▲ ▼

28. Use **CURSOR** arrows to select **cr** output, press **VALUE** (up) to activate output (CR). Verify that doors on right side close.

EXTEND CYCLE

29. Press **EXTENDED CYCLE** to return to Automatic Mode.

Table 5-1. I/O BOARD OUTPUTS TEST

O1 OUTPUTS SCREEN 1	PP PRESSURE PUMP CONTACTOR (AC0/2)	SP SUCTION PUMP CONTACTOR (AC1/2)	TL TRAVELER LEFT PILOT VALVE (AC3/2)	TR TRAVELER RIGHT PILOT VALVE (AC2/2)	FF SUCTION PUMP FILL PILOT VALVE (AC4/2)	FD SUMP & SUCTION PUMP DRAIN PILOT VALVE (AC5/2)
MF SPRAY HEADERS / MANIFOLD PILOT VALVE (AC15/4)	EF EXHAUST FAN CONTACTOR & RELAY (AC6/2)	DF DRYING FAN CONTACTOR (AC7/2)	NP NEUTRALI- ZING PUMP CONTACTOR (AC8/2)	RL RED LIGHT LEFT SIDE (AC9/2)	GL GREEN LIGHT LEFT SIDE (AC10/2)	RR RED LIGHT RIGHT SIDE (AC11/2)

O2 OUTPUT SCREEN 2	GR GREEN LIGHT RIGHT SIDE (AC12/2)	LT INTERIOR LIGHT RELAY (AC0/3)	P1 CHEMICAL PUMP 1 RELAY (AC2/3)	P3 CHEMICAL PUMP 3 RELAY (AC4/3)	P4 CHEMICAL PUMP 4 RELAY (AC5/3)	P5 CHEMICAL PUMP 5 RELAY (AC6/3)
F1 TANK 1 FILL VALVE (AC8/3)	F2 TANK 2 FILL VALVE (AC9/3)	F3 TANK 2 FILL VALVE (AC10/3)	CW COLD WATER FILL VALVE (AC11/3)	WH IN-LINE BOOSTER STEAM VALVE (AC12/3)	DH DRYING STEAM VALVE (AC13/3)	I1 TANK 1 RECIRC. INLET PILOT VALVE (AC0/4)

O3 OUTPUT SCREEN 3	O1 TANK 1 RECIRC. OUTLET PILOT VALVE (AC1/4)	I2 TANK 2 RECIRC. INLET PILOT VALVE (AC2/4)	O2 TANK 2 RECIRC. OUTLET PILOT VALVE (AC3/4)	I3 TANK 3 RECIRC. INLET PILOT VALVE (AC4/4)	O3 TANK 3 RECIRC. OUTLET PILOT VALVE (AC5/4)	CD COOLDOWN TANK DRAIN PILOT VALVE (AC6/4)
PD PRESSURE PIPING DRAIN PILOT VALVE (AC7/4)	SD SUCTION PIPING DRAIN PILOT VALVE (AC8/4)	CL CLOSE LEFT DOORS PILOT VALVE (AC10/4)	OL OPEN LEFT DOORS PILOT VALVE (AC9/4)	CR CLOSE RIGHT DOORS PILOT VALVE (AC12/4)	OR OPEN RIGHT DOORS PILOT VALVE (AC11/4)	DP DAMPER PILOT VALVE (AC13/4)

O4 OUTPUT SCREEN 4	FT FLOOR TILT PILOT VALVE (AC14/4)					

Table 5-2. I/O BOARD INPUTS TEST

I1 INPUTS SCREEN 1	TL TRAVELER LEFT POSITION SENSOR (LS0/2)	TR TRAVELER RIGHT POSITION SENSOR (LS1/2)	WF HOT WATER INLET FLOWMETER (LS0/3)	P1 PUMP 1 CHEMICAL FLOWMETER (LS1/3)	P3 PUMP 3 CHEMICAL FLOWMETER (LS3/3)	H1 TANK 1 HIGH WATER LEVEL SENSOR (LS4/3)
H2 TANK 2 HIGH WATER LEVEL SENSOR (LS5/3)	H3 TANK 3 HIGH WATER LEVEL SENSOR (LS6/3)	MC COOLDOWN TANK MID LEVEL SENSOR (LS7/3)	HC COOLDOWN TANK HIGH LEVEL SENSOR (LS8/3)	PO PRESSURE PUMP OVERLOAD RELAY (LS0/4)	SO SUCTION PUMP OVERLOAD RELAY (LS1/4)	LS LOAD SENSOR LEFT SIDE (LS2/4)

I2 INPUTS SCREEN 2	LC LEFT DOORS CLOSED SENSOR (LS3/4)	EO EXHAUST FAN OVERLOAD RELAY (LS4/4)	DO DRYING FAN OVERLOAD RELAY (LS5/4)	NO NEUTRALI- ZING PUMP OVERLOAD RELAY (LS6/4)	RC RIGHT DOORS CLOSED SENSOR (LS8/4)	PL LOW pH ALARM CONTACT (LS11/4)
PH HIGH pH ALARM CONTACT (LS12/4)	RS LOAD SENSOR RIGHT SIDE (LS15/4)					

Table 5-3. CONTROL BOARD ANALOG INPUTS TEST

BST = XXX.X
    IN-LINE BOOSTER RTD [°F or °C]
        (CHANNEL 0)
	PR = XXX.XX
	    PRESSURE TRANSMITTER [PSIG or BAR]
	        (CHANNEL 3)

DRY = XXX.X
    DRYING RTD [°F or °C]
 	
        (CHANNEL 1)
	CD = XXX.X
	    COOLDOWN TANK OR COLD WATER
	        INJECTION RTD [°F or °C]
	            (CHANNEL 2)

TABLE 5-4. INTERLOCK FEATURES

NOTE: Depending on options present on washer, some inputs or outputs may not be availble on display (represented by "--"). Interlock does not apply when inputs or outputs are not present.

Output	Conditions	Verify
PP	*Doors must be closed Pressure Pump overload relay must not be tripped One Tank Outlet Valve must open	Input: LC and RC Input: po Output: O1 or O2 or O3
SP	Suction Pump overload relay must not be tripped	Input: so
EF	Exhaust Fan overload relay must not be tripped	Input: eo
DF	Drying Fan overload relay must not be tripped	Input: do
NP	Neutralizing Pump overload relay must not be tripped	Input: no
P1	All other chemical pumps must not be activated	Output: p2 and p4 and p5
P2	All other chemical pumps must not be activated	Output: p1 and p4 and p5
P4	All other chemical pumps must not be activated	Output: p1 and p2 and p5
P5	All other chemical pumps must not be activated	Output: p1 and p2 and p4
OL	Pressure Pump must not be activated Floor Tilt must not be activated In-line Heat Exchanger steam valve must not be activated	Output: pp Output: ft Output: wh
OR	Pressure Pump must not be activated Floor Tilt must not be activated In-line Heat Exchanger steam valve must not be activated	Output: pp Output: ft Output: wh
FT	Doors must be closed	Input: LC and RC

* Left Doors Pumps Safety Switch (LDPSS) and Right Doors Pumps Safety Switch (RDPSS) must also be activated (electrical interlock not controlled by the software).

5.3 How to Enter Service Mode

1. Position electrical disconnect switch to **ON**.

2. Set **POWER-OFF/STANDBY** switch, located behind printer door, to **POWER** (see Figure 5-2) and immediately press and hold **PRINT** on **PRINT/PRINT VALUES** Printer Function Switch.

NOTE: Top portion of PRINT/PRINT VALUES switch must be pressed immediately after POWER has been pressed, otherwise washer will automatically enter Automatic Mode.

3. Display shows:

```
┌──────── STATUS ────────┐
│  STERIS                │
│  BASIL 9500            │
└────────────────────────┘
```
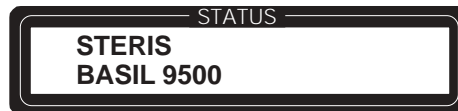
and printer records:

```
* CONTROL  ON        7:04:47A ─────── Current Time
                     98/03/09 ─────── Current
                                        Date
            *****************************
                      BASIL 9500
Unit Serial ──────────  S/N 3600000000
Number      *********************** * * *
```

NOTE: If incorrect time and date are printed, refer to Maintenance Manual (P-764329-189) Section 4, for instructions on adjusting time and date.

4. Then display shows:

```
┌──────── STATUS ────────┐
│  ENTER SERVICE MODE    │
│  ACCESS CODE: XXXX     │
└────────────────────────┘
```

5. The access code is the four last digits of the serial number inverted by pairs. If the serial number is 36xxxxx1234, the access code will be 3412.
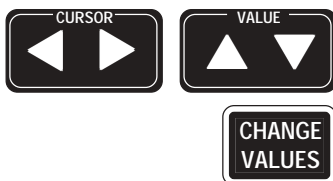
6. Enter access code using **VALUE (up or down)** to scroll numbers and **CURSOR (left or right)** to move from one position to the next.

7. Once proper access code is entered, press **CHANGE VALUES** to confirm entry, display shows:

```
┌──────── STATUS ────────┐
│  SERVICE MODE          │
│  BASIL 9500            │
└────────────────────────┘
```

then...

```
┌──────── STATUS ────────┐
│  TESTS       CONSUMP.  │
│  SET-UP      CALIBRATE │
└────────────────────────┘
```
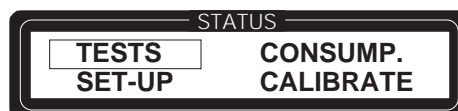
☐ *indicates flashing position.*

5.3.1 How to Activate Digital Outputs

CYCLE START

1. Press **CYCLE START** to initiate test. Display shows:

```
┌─────────────── STATUS ───────────────┐
│  ┌─────────┐                          │
│  │I/O TESTS│        TOUCHPADS         │
│  └─────────┘                          │
│   DISPLAYS          PRINTER           │
└───────────────────────────────────────┘
```
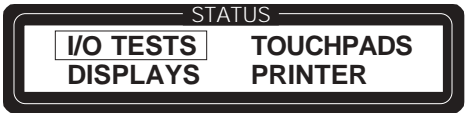
    ☐ *indicates flashing position.*

CYCLE START

2. Press **CYCLE/START** again to initiate I/O tests. Display shows:

```
┌─────────────── STATUS ───────────────┐
│  ┌─────────┐                          │
│  │ DIG.OUT │        DIG.IN            │
│  └─────────┘                          │
│   ANALOG IN                           │
└───────────────────────────────────────┘
```
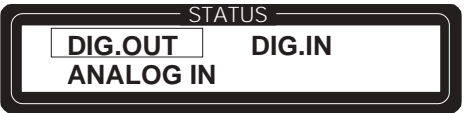
    ☐ *indicates flashing position.*

CYCLE START

3. Press **CYCLE/START** once more to initiate Digital Outputs test. Display shows:

```
┌─────────────── STATUS ───────────────┐
│      ┌────┐                           │
│  01  │ pp │ sp  tl  tr  ff  fd        │
│      └────┘                           │
│  mf   ef  df  np  rl  gl  rr          │
└───────────────────────────────────────┘
```
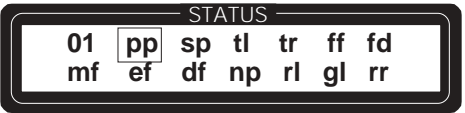
    ☐ *indicates flashing position.*

NOTE: Missing options are represented by two dashes: - -.

5.3.2 How to Verify Suction Pump Rotation (Option)
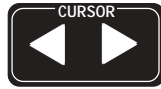
1. To select Suction Pump (sp) digital output, use **CURSOR (left or right)** to move to **sp**. Display shows:

```
┌──────────── STATUS ────────────┐
│  01   pp  sp  tl   tr   ff   fd │
│  mf   ef  df  np   rl   gl   rr │
└─────────────────────────────────┘
```
☐ *indicates flashing position.*
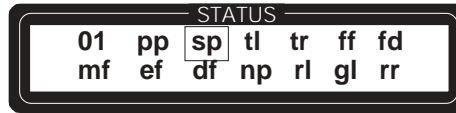
2. When selected output is flashing, (**sp suction pump**), press **VALUE (up)** to activate suction pump (**SP**).

NOTE: When ouput is selected, letters will change from lowercase to capital letters. When de-activated, letters will change from capitals to lowercase.

NOTE: Two persons are required for this operation, one person at the control panel and one person to verify pump rotation.

3. Press **VALUE (down)** again to de-activate suction pump. A second person must verify motor rotation. As motor is slowing down, verify that motor is rotating in the same direction as arrow located on the motor.

4. If pump is rotating in wrong direction, lock out, tag out building disconnect switch to **OFF** position.

5. Reverse any two 3-phase wires on **TB1**, located inside Electrical Supply box (on top of Mechanical Core).

6. Position building disconnect switch to **ON** position.

7. Enter Service Mode (see Section 5.3) to access Digital Outputs menu and verify suction pump rotation once again.

8. When pump is rotating in proper direction, Digital Outputs Menu is still displayed:

```
┌──────────── STATUS ────────────┐
│  01   pp  sp  tl   tr   ff   fd │
│  mf   ef  df  np   rl   gl   rr │
└─────────────────────────────────┘
```
☐ *indicates flashing position.*

⚠ **WARNING – BURN HAZARD: Allow unit to cool down before performing any service on pump. Surface of motor and piping become very hot during unit operation.**
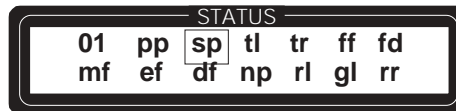
⚠ **CAUTION – POSSIBLE EQUIPMENT DAMAGE: Before operating equipment, make sure pump motor is rotating in proper direction.**

5.3.3 How to Verify Drying Fan Rotation (Option)
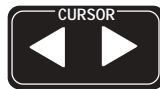
1. To select Drying Fan **(df)** digital output, use **CURSOR (left or right)** to move to **df**. Display shows:

```
┌──────────── STATUS ────────────┐
│  01   pp   sp   tl   tr   ff   fd  │
│  mf   ef  [df]  np   rl   gl   rr  │
└────────────────────────────────┘
```
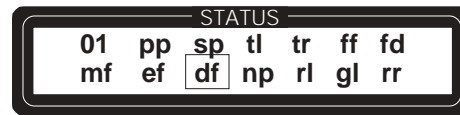
☐ *indicates flashing position.*

2. When selected output is flashing, **(df Drying Fan)**, press **VALUE (up)** to activate drying fan DF (located on top of Mechanical Core.

NOTE: Two persons are required for this operation: one person at the control panel and one person to verify fan motor rotation.

3. Then, press **VALUE (down) again** to de-activate drying fan. A second person must verify fan motor rotation. As fan is slowing down, verify that fan is rotating in the same direction as the arrow located on the motor.

4. If fan is rotating in wrong direction, lock out, tag out building disconnect switch to **OFF** position.

5. Make sure numbers on fan motor and on wires match.

6. Reverse any two 3-phase wires on exhaust fan motor.

7. Position building disconnect switch to ON position.

8. Enter Service Mode (see Section 5.3) to access Digital Outputs menu and verify drying exhaust fan once again.

9. When fan is rotating in proper direction, Digital Outputs Menu is still displayed:

```
┌──────────── STATUS ────────────┐
│  01   pp   sp   tl   tr   ff   fd  │
│  mf   ef  [df]  np   rl   gl   rr  │
└────────────────────────────────┘
```

☐ *indicates flashing position.*

⚠ WARNING – BURN HAZARD: Allow unit to cool down before performing any service on pump. Surface of motor and piping become very hot during unit operation.

⚠ CAUTION – POSSIBLE EQUIPMENT DAMAGE: Before operating equipment, make sure pump motor is rotating in proper direction.

Oil levels shown are when doors are in closed position.

- Sinle door units (tanks 1 and 2)

- Double door units (tanks 1,2,3, and 4)

Tank 4

Tank 3

Tank 2

Plugs

Tank 1

High Level Oil
7" (17.7 cm)

Low Level Oil
1-1/2" (3.8 cm)

REF.: #920-006-429

Figure 5-4. Air/Oil Tanks

5.3.4 Air/Oil Tanks

SELECT CYCLE

1. Press **SELECT CYCLE** twice to access Air/Oil tanks Outputs menu (**03**). Display shows:

```
┌───────────── STATUS ─────────────┐
│ ┌──┐                             │
│ │03│ o1  l2  o2  l3  o3  cd     │
│ └──┘                             │
│   pd  sd  cl  ol  cr  or  dp    │
└───────────────────────────────────┘
```
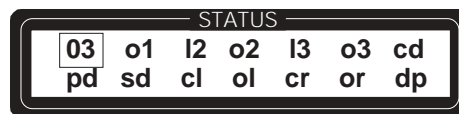
☐ *indicates flashing position.*
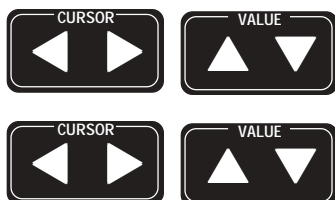
CURSOR **VALUE**

2. When Air/Oil Tanks Ouputs menu (**03**) is flashing, move **CURSOR** (right) to **ol** (Open Left). Press **VALUE** (up) to activate output (**OL**). Doors open. Press **VALUE** (down) to de-activate output (**ol**). Doors remain open.

CURSOR **VALUE**

3. Press **CURSOR** (right) to move to **cl** (Close Left). Press **VALUE** (up) to activate **CL**. Doors close. Press **VALUE** (down) to de-activate output (**cl**). Doors remain closed.

4. Repeat steps 1 through 3, at least four times to make sure all air has been removed from cylinder.

5. If double door unit, repeat steps 1 through 4 for right side outputs: **or** (Open Right) and **cr** (Close Right).

6. Once all air has been removed from cylinders and doors are de-activated, (**cr, cl**) on single door units and (cr, cl, or, ol) on double door units, check oil level in Air/Oil tanks on top of washer (see Figure 5-4).

NOTE: Make sure all door outputs are de-activated before removing plugs on Air/Oil tanks. If outputs are not de-activated, air pressure will blow oil out of the tanks.

7. As shown in figure 5-4, there are two Air/Oil tanks on a single-door unit (Tanks 1 and 2) and four tanks on a double-door unit (Tanks 1, 2, 3, and 4).

8. Oil level in tanks should be adjusted at 1-1/2″ (3.8 cm) in Tank 1 and at 7″ (17.8 cm) in Tank 2. Oil level will alternate when doors open and close.

⚠ **CAUTION – POSSIBLE EQUIPMENT DAMAGE: Before removing plugs on Air/Oil Tanks, make sure doors are in closed postion and all door outputs are de-activated.**

9. If oil level is not correct, remove plugs on Air/Oil tanks (see Figure 5-4).

NOTE: Make sure all door outputs are de-activated before removing plugs on Air/Oil tanks. If outputs are not de-activated, air pressure will blow oil out of the tanks.

10. Fill tanks until oil level in Tank 1 reaches 1-1/2″ (3.8 cm) and 7″ (17.8 cm) in Tank 2 (see Figure 5-4). If double door unit, repeat operation for Tank 3 (7″ [17.8 cm]) and Tank 4 (1-1/2″ [3.8 cm]).

NOTE: Never fill all tanks to the top.

Injection Tubes

Injection Ports

Graduated
Cylinder

Graduated
Cylinder

RÉF: 920-003-492

Injection Tubes

Figure 5-5. Chemical Injection Port

5.4 Calibration

5.4.1 How to Calibrate Chemical Injection Rate

STOP/RESET

⚠ **WARNING – CHEMICAL BURN/EYE INJURY HAZARD: Washer Chemicals are caustic and can cause adverse effects to exposed tissues. Do not get in eyes, on skin, or attempt to ingest by mouth.**

• Read and follow the precautions and instructions on the chemical label and in the Material Safety Data Sheet (MSDS) prior to handling the chemical, refilling the chemical containers, or servicing the chemical injection pumps and lines.

• Refer to MSDS for appropriate Personal Protective Equipment (PPE) whenever handling chemicals or servicing chemical injection pumps and lines.

1. To calibrate Chemical Injection rate, press **STOP/RESET** until main Service Mode menu appears. Display shows:

```
┌──────── STATUS ────────┐
│ ┌─────────┐            │
│ │ TESTS   │  CONSUMP.  │
│ └─────────┘            │
│   SET-UP     CALIBRATE │
└────────────────────────┘
```
☐ *indicates flashing position.*

SELECT CYCLE

2. Press **SELECT CYCLE** until **CALIBRATE** is flashing. Display shows:

```
┌──────── STATUS ────────┐
│   TESTS      CONSUMP.   │
│            ┌───────────┐│
│   SET-UP   │ CALIBRATE ││
│            └───────────┘│
└────────────────────────┘
```
☐ *indicates flashing position.*

CYCLE START

3. Press **CYCLE/START** to confirm selection and access Calibration menu. Display Shows:

```
┌──────── STATUS ────────┐
│ ┌─────────┐            │
│ │ RTDs    │   PRESSURE │
│ └─────────┘            │
│   CHEMICAL    WATER    │
└────────────────────────┘
```
☐ *indicates flashing position.*

SELECT CYCLE

4. To perform Chemical Calibration, press **SELECT CYCLE** until **CHEMICAL** is flashing:

```
┌──────── STATUS ────────┐
│   RTDs       PRESSURE  │
│ ┌──────────┐           │
│ │ CHEMICAL │  WATER    │
│ └──────────┘           │
└────────────────────────┘
```
☐ *indicates flashing position.*

CYCLE START

5. Press **CYCLE START** to confirm selection. Display shows:

```
──────── STATUS ────────
 ALKALINE     ACID
 NEUTRAL      DESCALER
```

6. Loosen fitting from chemical injection port (IP1) on **ALKALINE** tank (Pump1). Pull out blue tubing and place tubing in a 34 oz. (1 l) (or more) graduated cylinder (see Figure 5-5).

CYCLE START

7. Press **CYCLE/START** to confirm selection. Display shows:

```
──────── STATUS ────────
 PRESS START TP
 TO ENERGIZE PUMP
```

CYCLE START

8. Press **CYCLE/START** again to initiate injection. Display shows:

```
──────── STATUS ────────
 INJECTION IN
 PROGRESS
```

9. When injection is completed, display shows:

```
──────── STATUS ────────
 CHEM. AMOUNT = XXX.X
 PRESS CVTP TO SET
```

VALUE ▲ ▼

10. Measure collected amount of chemical in graduated cylinder. Press **VALUE (up or down)** to enter value measured in graduated cylinder.

NOTE: Use the same injection units as values programmed in Service Mode (oz. or ml).

CHANGE VALUES

11. Press **CHANGE VALUES** to confirm selection. Display shows:
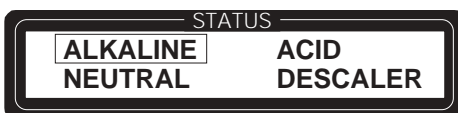
```
──────── STATUS ────────
 ALKALINE     ACID
 NEUTRAL      DESCALER
```
☐ *indicates flashing position.*

12. Insert tubing into **ALKALINE** Chemical Injection port (IP1) and tighten fitting.

SELECT CYCLE

13. Repeat steps 5 through 12 to calibrate **DESCALER** Chemical injection port (Port IP2, green tubing) if automatic Descaler option is present. Press **SELECT CYCLE** until desired chemical flashes on screen.

14. Repeat steps 5 through 12 to calibrate **ACID** chemical injection port (Port IP3, red tubing) if Second Reusable-Throwaway Chemical System option is present. Press **SELECT CYCLE** until desired chemical flashes on screen.

SELECT CYCLE

15. While in Calibration Menu, press **SELECT CYCLE** until **NEUTRAL** is flashing.

16. Press **CYCLE START** to confirm selection. Display shows:

CYCLE START

```
                STATUS
   ┌─────────────────────────────┐
   │  ALKALINE      ACID         │
   │ ┌──────────┐                │
   │ │ NEUTRAL  │  DESCALER      │
   │ └──────────┘                │
   └─────────────────────────────┘
```
   □ indicates flashing position.

17. Press **SELECT CYCLE** until **LOWER pH** is flashing. Press **CYCLE START** to confirm selection. Display shows:
```
                STATUS
   ┌─────────────────────────────┐
   │ ┌──────────┐                │
   │ │ LOWER pH │   RAISE pH     │
   │ └──────────┘                │
   │  SET-UP                     │
   └─────────────────────────────┘
```
   □ indicates flashing position.
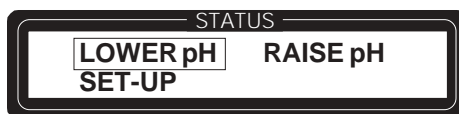
18. Push down on quick-disconnect ring and pull out black tubing and place tubing from pump 4 (IP4) in a 34 oz. (1 l) (or more) graduated cylinder (see Figure 5-5).

19. Press **CYCLE/START** to initiate injection. Display shows:
```
                STATUS
   ┌─────────────────────────────┐
   │  PRESS START TP             │
   │  TO ENERGIZE PUMP           │
   └─────────────────────────────┘
```

then:
```
                STATUS
   ┌─────────────────────────────┐
   │  INJECTION IN               │
   │  PROGRESS                   │
   └─────────────────────────────┘
```

20. When injection is completed, display shows:
```
                STATUS
   ┌─────────────────────────────┐
   │  CHEM. AMOUNT = XXX.X        │
   │  PRESS CVTP TO SET           │
   └─────────────────────────────┘
```

21. Measure collected amount of chemical in graduated cylinder. Press **VALUE (up or down)** to enter value measured in graduated cylinder. Display shows:
```
                STATUS
   ┌─────────────────────────────┐
   │ ┌──────────┐                │
   │ │ LOWER pH │   RAISE pH     │
   │ └──────────┘                │
   │  SET-UP                     │
   └─────────────────────────────┘
```
   □ indicates flashing position.
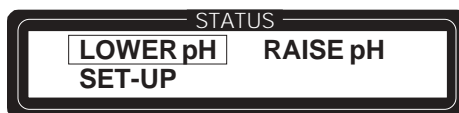
NOTE: Injection units used must be the same as values programmed in Service Mode (oz. or ml).

22. Press **CHANGE VALUES** to confirm selection. Display shows:
```
                STATUS
   ┌─────────────────────────────┐
   │  LOWER PH      RAISE PH      │
   │ ┌──────────┐                │
   │ │ SET-UP   │                │
   │ └──────────┘                │
   └─────────────────────────────┘
```
   □ indicates flashing position.
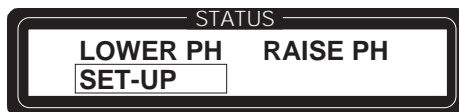
23. Insert tubing back into Cooldown Tank port (IP4).

24. Repeat steps 3 through 12 to **RAISE pH** (IP5, white tubing). Press **SELECT CYCLE** until **RAISE pH** flashes on screen.

5-19

5.4.2 How to Set Descaler Rate

1. To set Descaler rate, press **STOP/RESET** until main Service Mode menu appears. Display shows:
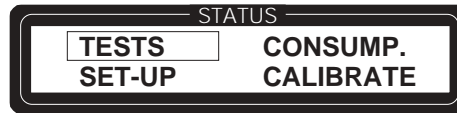
```
┌─────────── STATUS ───────────┐
│  ┌─────────┐                  │
│  │ TESTS   │      CONSUMP.    │
│  └─────────┘                  │
│     SET-UP       CALIBRATE    │
└──────────────────────────────┘
```
   ☐ *indicates flashing position.*

SELECT CYCLE

2. Press **SELECT CYCLE** until **SET-UP** is flashing:
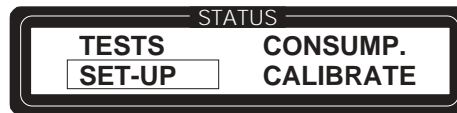
```
┌─────────── STATUS ───────────┐
│     TESTS        CONSUMP.     │
│  ┌─────────┐                  │
│  │ SET-UP  │     CALIBRATE    │
│  └─────────┘                  │
└──────────────────────────────┘
```
   ☐ *indicates flashing position.*

NOTE: Press CHANGE VALUES to scroll menus until descaler menu appears.

VALUE ▲ ▼

3. Use **VALUES** (up or down) touchpad to raise or lower Descaler proportion. Display shows:

```
┌─────────── STATUS ───────────┐
│     SET DESCALER RATE         │
│     2 oz/gal                  │
└──────────────────────────────┘
```

NOTE: Default Descaler proportion is set to 2oz/gal.

STOP RESET

4. Once Descaler Rate established, press **STOP/RESET** until main Service Mode menu appears.

5.5 How to Set pH Ratios

5.5.1 STERIS Chemicals

> ⚠ **WARNING - CHEMICAL BURN/EYE INJURY HAZARD: Washer chemicals are caustic and can cause adverse effects to exposed tissues. Do not get in eyes, on skin, or attempt to ingest by mouth.**
>
> **• Read and follow the precautions and instructions on the chemical label and in the Material Safety Data Sheet (MSDS) prior to handling the chemical, refilling the chemical containers, or servicing the chemical injection pumps and lines.**
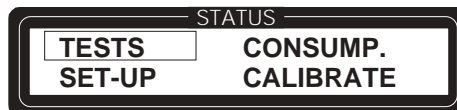>
> **• Refer to MSDS for appropriate Personal Protective Equipment (PPE) whenever handling chemicals or servicing chemical injection pumps and lines.**

NOTE: The following tables will help you establish ratios for STERIS recommended chemicals only. For chemicals other than STERIS, follow manufacturer's recommendations.

NOTE: Values indicated in these tables refer to the following chemicals:

- ALKALINE: Cage-Klenz® 100 Cage Wash Detergent; Cage-Klenz® 150 Cage Wash Detergent; Cage-Klenz® 180, Cage Wash Detergent; and CV®-Neutralizer.

- ACID: Cage-Klenz® 200, Acid-Based Cage Wash Detergent; Cage-Klenz® 220 Acid-Based Cage Wash Detergent; Cage-Klenz® 250 Acid-Based Cage Wash Detergent; and Cage-Klenz® 280 Acid-Based Cage Wash Detergent.

1) How to use the charts:

   Using reference letter for each chemical, identify and circle both chemical names;

   Draw a vertical line and a horizontal line from each chemical selected;

   Circle value where the two lines intersect;

   Transcribe this value in the parentheses.

STERIS Chemical	Reference Letter
Acid Detergent CK/250	A
Alkaline Detergent CK/180	B
Acid Neutralizer CK/180	C
Alkaline Neutralizer CK/250	D

R_{nba} **(5,26)**	D (Chemical used to neutralize)			
A (Solution to be neutralized)	CK-100	CK-150	CK-180	CV-Ne
CK-200	7.14	4.54	10	1.38
CK-220	2.85	1.92	4.34	0.55
CK-250	2,34	1,63	5,26	0,58
CK-280	2,39	1,80	3,92	0,60

2) STERIS chemicals used in this unit :

Type of Chemical	STERIS Chemical Name	Table Reference Letter
Acid Detergent	_____	A
Alkaline Detergent	_____	B
Acid Neutralizer (To Neutralize A)	_____	C
Alkaline Neutralizer (To Neutralize B)	_____	D

Chart 1

R_{nab} (_____)	**D** (Chemical used to neutralize)			
B (Solution to be neutralized)	CK-200	CK-220	CK-250	CK-280
CK-100	0.14	0.35	0.29	0.22
CK-150	0.22	0.52	0.42	0.32
CK-180	0.1	0.23	0.19	0.16
CV-Neutralizer	0.72	1.79	1.48	1.18

Chart 2

R_{nba} (_____)	**C** (Chemical used to neutralize)			
A (Solution to be neutralized)	CK-100	CK-150 CIP-150	CK-180	CV-Neutralizer
CK-200	7.14	4.54	10	1.38
CK-220	2.85	1.92	4.34	0.55
CK-250	3.44	2.38	5.26	0.67
CK-280	4.54	3.12	6.25	0.84

Chart 3

R_{ba} (_____)	**B** (Chemical used to neutralize)			
A (Solution to be neutralized)	CK-100	CK-150	CK-180	CV-Neutralizer
CK-200	7.14	4.54	10	1.38
CK-220	2.85	1.92	4.34	0.55
CK-250	3.44	2.38	5.26	0.67
CK-280	4.54	3.12	6.25	0.84

Chart 4

R_{ab} (_____)

B (Solution to be neutralized)	A (Chemical used to neutralize)			
	CK-200	CK-220	CK-250	CK-280
CK-100	0.14	0.35	0.29	0.22
CK-150	0.22	0.52	0.42	0.32
CK-180	0.1	0.23	0.19	0.16
CV-Neutralizer	0.72	1.79	1.48	1.18

Chart 5

R_{nbna} (_____)

D (Solution to be neutralized)	C (Chemical used to neutralize)			
	CK-100	CK-150 CIP-150	CK-180	CV-Neutralizer
CK-200	7.14	4.54	10	1.38
CK-220	2.85	1.92	4.34	0.55
CK-250	3.44	2.38	5.26	0.67
CK-280	4.54	3.12	6.25	0.84

Chart 6

R_{nanb} (_____)

C (Solution to be neutralized)	D (Chemical used to neutralize)			
	CK-200	CK-220	CK-250	CK-280
CK-100	0.14	0.35	0.29	0.22
CK-150	0.22	0.52	0.42	0.32
CK-180	0.1	0.23	0.19	0.16
CV-Neutralizer	0.72	1.79	1.48	1.18

5.5.2 Non-STERIS Chemicals

For non-STERIS chemicals, follow manufacturer's recommendations.

1. Identify Chemicals used in this unit :

    Type of Chemical   **Chemical Name**

    A = Acid Detergent   _____

    B = Alkaline Detergent   _____

    C = Acid Neutralizer (To neutralize A)   _____

    D = Alkaline Neutralizer (To neutralize B)   _____

2. Establish the ratios:

    R_{nab} = Quantity of alkaline neutralizer (D) needed to neutralize 1 ml of alkaline detergent (B) = _____

    R_{nba} = Quantity of acid neutralizer (C) needed to neutralize 1 ml of acid detergent (A) = _____

    R_{ba} = Quantity of alkaline detergent (B) needed to neutralize 1 ml of acid detergent (A) = _____

    R_{ab} = Quantity of acid detergent (A) needed to neutralize 1 ml of alkaline detergent (B) = _____

    R_{nbna} = Quantity of acid neutralizer (D) needed to neutralize 1 ml of alkaline neutralizer (D) = _____

    R_{nanb} = Quantity of alkaline neutralizer (D) needed to neutralize 1 ml of acid neutralizer (C) = _____

5.5.3 How to Calibrate Chemical Neutralizing (pH) System (Option)

SELECT CYCLE

1. While in Calibration Menu, press **SELECT CYCLE** until **SET-UP** is flashing. Display shows:

```
┌──────────── STATUS ────────────┐
│  LOWER pH      RAISE pH         │
│ ┌─────────┐                     │
│ │ SET-UP  │                     │
│ └─────────┘                     │
└─────────────────────────────────┘
```

☐ indicates flashing position.

> ⚠ **WARNING – CHEMICAL BURN/EYE INJURY HAZARD: Washer chemicals are caustic and can cause adverse effects to exposed tissues. Do not get in eyes, on skin, or attempt to ingest by mouth.**
>
> **• Read and follow the precautions and instructions on the chemical label and in the Material Safety Data Sheet (MSDS) prior to handling the chemical, refilling the chemical containers, or servicing the chemical injection pumps and lines.**
>
> **• Refer to MSDS for appropriate Personal Protective Equipment (PPE) whenever handling chemicals or servicing chemical injection pumps and lines.**

CYCLE START

2. Press **CYCLE START** to confirm selection. Display shows:

```
┌──────────── STATUS ────────────┐
│  TANK 1        DET. TYPE        │
│ ┌─────────┐                     │
│ │ ALKALINE│                     │
│ └─────────┘                     │
└─────────────────────────────────┘
```

☐ indicates flashing position.

VALUE ▲ ▼   **CHANGE VALUES**

3. Press **VALUE (up or down)** to move from **ALKALINE** to **ACID**. Press **CHANGE VALUES** to confirm selection.

4. If Second Reusable-Throwaway Chemical System (option), display shows:

```
┌──────────── STATUS ────────────┐
│  TANK 3        DET. TYPE        │
│ ┌─────────┐                     │
│ │ ACID    │                     │
│ └─────────┘                     │
└─────────────────────────────────┘
```

☐ indicates flashing position.
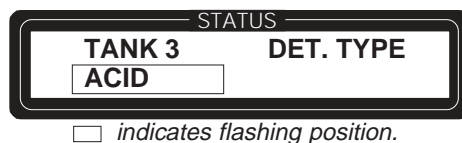
*NOTE: Depending on chemical used in tank, press **VALUE** (up or down) to select chemical type.*

VALUE ▲ ▼   **CHANGE VALUES**

5. Press **VALUE (up or down)** to move from **ACID** to **ALKALINE**. Press **CHANGE VALUES** to confirm selection. Display shows:

```
┌─────────── STATUS ───────────┐
│   ALKALINE < - LOWER pH      │
│   RATIO Rnab = X.XX          │
└──────────────────────────────┘
```

6. Enter ratio value obtained from Chart 1 or Ratio **Rnab** if not using a STERIS chemical. Press and hold **VALUE** to quickly increase or decrease ratio or press **VALUE (up or down)** to slowly increase or decrease ratio. Then press **CHANGE VALUES** to confirm selection.

7. Display shows next ratio value to be entered:

```
┌─────────── STATUS ───────────┐
│   ALKALINE < - LOWER pH      │
│   RATIO Rnab = X.XX          │
└──────────────────────────────┘
```

Enter ratio value obtained from Chart 2 or Ratio **Rnba** if not using a STERIS chemical. Press **VALUE (up or down)** to increase or decrease ratio. Then press **CHANGE VALUES** to confirm selection.

8. Display shows next ratio value to be entered:

```
┌─────────── STATUS ───────────┐
│   ACID < - RAISE pH          │
│   RATIO Rnba = X.XX          │
└──────────────────────────────┘
```

Enter ratio value obtained from Chart 3 or Ratio **Rba** if not using a STERIS chemical. Press **VALUE (up or down)** to increase or decrease ratio. Then press **CHANGE VALUES** to confirm selection.

9. Display shows next ratio value to be entered:

```
┌─────────── STATUS ───────────┐
│   ALKALINE < - ACID          │
│   RATIO Rab = X.XX           │
└──────────────────────────────┘
```

Enter ratio value obtained from Chart 4 or Ratio **Rab**. if not using a STERIS chemical. Press **VALUE (up or down)** to increase or decrease ratio. Then press **CHANGE VALUES** to confirm selection.

10. Display shows next ratio value to be entered:

```
┌─────────── STATUS ───────────┐
│   LOWER pH < - RAISE pH      │
│   RATION Rnbna = X.XX        │
└──────────────────────────────┘
```

Enter ratio value obtained from Chart 5 or Ratio **Rnbna** if not using a STERIS chemical. Press **VALUE (up or down)** to increase or decrease ratio. Then press **CHANGE VALUES** to confirm selection.

11. Display shows next ratio value to be entered:

```
┌─────────── STATUS ───────────┐
│   LOWER pH < - LOWER pH      │
│   RATIO Rnanb = X.XX         │
└──────────────────────────────┘
```

Enter ratio value obtained from chart 6 or Ratio **Rnanb** if not using a Calgon chemical. Press **VALUE (up or down)** to increase or decrease ratio. Then press **CHANGE VALUES** to confirm selection.

12. Display returns to:
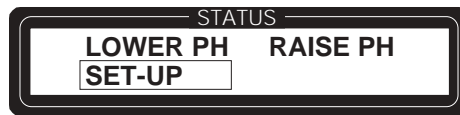
```
┌──────────────── STATUS ────────────────┐
│  LOWER PH      RAISE PH                 │
│ ┌─────────┐                             │
│ │ SET-UP  │                             │
│ └─────────┘                             │
└─────────────────────────────────────────┘
```
☐ *indicates flashing position.*

13. Then, press **STOP/RESET** until main Service Mode menu appears. Display shows:
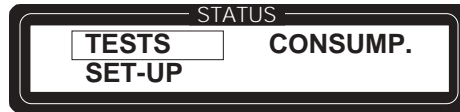
```
┌──────────────── STATUS ────────────────┐
│ ┌─────────┐                             │
│ │ TESTS   │      CONSUMP.               │
│ └─────────┘                             │
│   SET-UP                                │
└─────────────────────────────────────────┘
```
☐ *indicates flashing position.*

14. The printer will automatically generate a printout of the ratios which have been entered. If the ratios are different from the ones on the charts, press SET-UP in the Calibration Menu to recalibrate.

5-27

RÉF.: 920-003-954
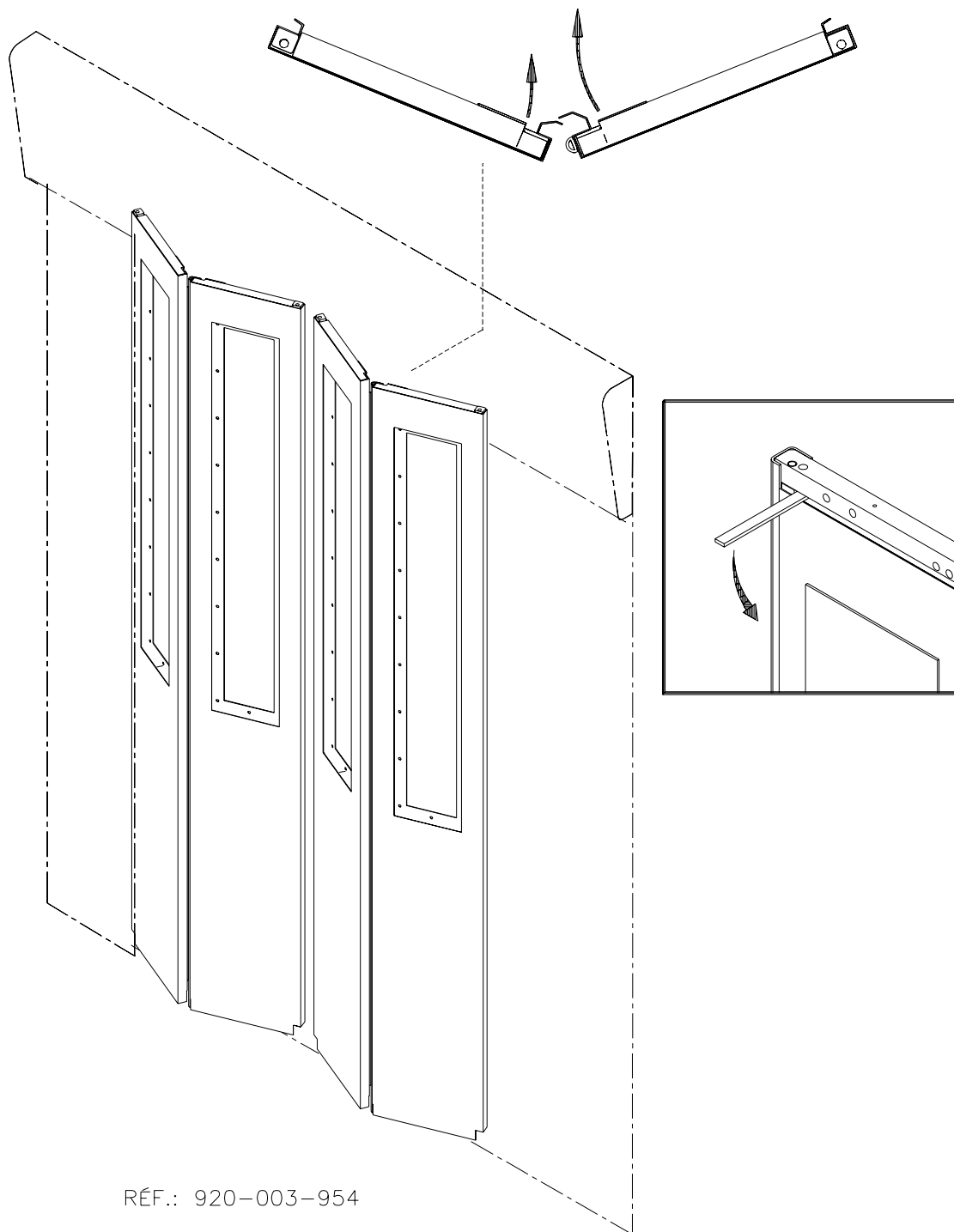
Figure 5-6. Emergency Exit Safety Doors

5.6 Miscellaneous Verifications in Automatic Mode

5.6.1 Safety Features

STOP RESET   EXTEND CYCLE

⚠ **WARNING – PERSONAL INJURY HAZARD: To open doors from inside wash chamber, press Emergency Safety Guard Rails. Washer operation will automatically stop. Then push firmly between door panels using shoulder and upper arm, applying upper body force. Do not push between the doors, but between door panels.**

⚠ **WARNING – PERSONAL INJURY AND/OR EQUIP-MENT DAMAGE HAZARD: To test or demonstrate Emergency Exit Safety Doors, first press Emergency Stop Pushbutton) located under control) or Emerg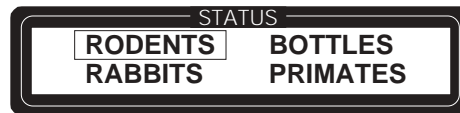ency Safety Guard Rails (inside wash chamber) to turn power OFF. If power is still on while adjusting or servicing doors, the Photoelectric Sensor will detect the movement of the door panels and doors will open automatically.**

1. Press **STOP/RESET** until main Service Mode Menu appears, then press **EXTEND CYCLE**, to enter Automatic Mode. Display shows:

```
┌──────── STATUS ────────┐
│ ┌─────────┐            │
│ │ RODENTS │   BOTTLES  │
│ └─────────┘            │
│   RABBITS    PRIMATES  │
└────────────────────────┘
```
☐ *indicates flashing position.*

DOOR OPEN   DOOR CLOSE

2. To verify operation of Doors, press **DOOR OPEN** and **DOOR CLOSE**.

3. If an obstruction is detected, doors will not close. Display will show:

```
┌──────── STATUS ────────┐
│   ALARM:  LOAD DOORS    │
│        OBSTRUCTED       │
└────────────────────────┘
```

ALARM REPLY

4. Remove obstruction and press **ALARM REPLY**.

DOOR OPEN **DOOR CLOSE**

DOOR OPEN

5. Press **DOOR OPEN** or **DOOR CLOSE** to continue verification of door operation.

6. To verify Emergency Stop Guard Rails, open doors by pressing **DOOR OPEN.**

7. From inside wash chamber press down on Emergency Stop Guard Rails. Control should be de-energized.

8. Raise Emergency Stop Guard Rails to re-energize washer and return to Automatic Mode.

NOTE: To test Emergency Exit Safety Doors, one person must remain inside wash chamber while another person operates doors.

DOOR CLOSE

9. Outside washer, close doors by pressing **DOOR CLOSE**, then push Emergency Stop Pushbutton. Control should be de-energized and depressurized and washer operation should be interrupted.

10. From inside wash chamber, test each Emergency Exit Safety Door (two on single door units, four on double door units), by pushing firmly between door panels.

NOTE: Do not push between the two doors, but between door panels.

11. To close door sections, fold left side panel into right side panel, then press panels firmly into place (see Figure 5-6).

NOTE: All Emergency Exit Safety Doors must be closed before re-energizing control.
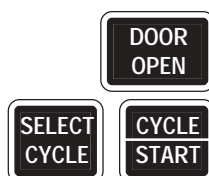
12. Pull out Emergency Stop Pushbutton to re-energize control.

DOOR OPEN

13. To verify that cycle does not start while doors are opened, open loading doors by pressing **DOOR OPEN**.

SELECT CYCLE **CYCLE START**

14. Press **SELECT CYCLE** to select **RODENTS.** Press **CYCLE/START** to start selected cycle. Display shows:

```
────── STATUS ──────
LOAD DOOR OPEN
CLOSE & PRESS START
```

DOOR CLOSE

15. Close doors by pressing **DOOR CLOSE**.

16. If double door unit (option), on unload side doors must be verified manually. Display shows:

```
────── STATUS ──────
PLEASE OPEN DOOR
AND REMOVE LOAD
```
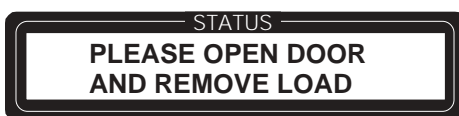
17. Push Emergency Stop Pushbutton to depressurize washer.

18. Slide fingers between doors and push doors apart (about 12 inches [30.5 cm]).

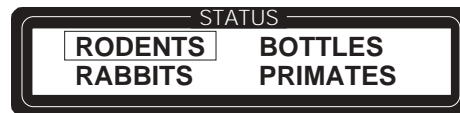19. Pull Emergency Stop Pushbutton to re-energize washer.

CYCLE START

20. Press **CYCLE/START** to select cycle. Display shows:

```
┌──────── STATUS ────────┐
│   LOAD DOOR OPEN        │
│   CLOSE & PRESS START   │
└────────────────────────┘
```

DOOR CLOSE

21. On unload side, close unload doors by pressing **DOOR CLOSE**.

CYCLE START

22. Press **CYCLE/START** again. Display shows:

```
┌──────── STATUS ────────┐
│  RODENTS      BOTTLES   │
│  RABBITS      PRIMATES  │
└────────────────────────┘
```
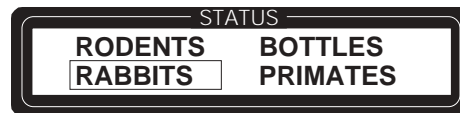▢ *indicates flashing position.*

5.6.2 Automatic Floor Tilt (Option)

SELECT CYCLE

1. Press **SELECT CYCLE** until **RABBITS** cycle is flashing:

```
┌──────── STATUS ────────┐
│  RODENTS      BOTTLES   │
│  RABBITS      PRIMATES  │
└────────────────────────┘
```
▢ *indicates flashing position.*

2. Press **CYCLE/START** once to start **RABBITS** cycle.

CYCLE START

3. If **Automatic Floor Tilt** option is present, look through door window to make sure floor is tilted.

5.6.3 Piping and Ventilation

4. Inspect all piping, on service side and on top of washer for leaks. If any leaks occur, tighten appropriate clamps and unions.

5. Check for steam leaking out of doors. If steam is leaking, during the final rinse phase, increase unit ventilation CFM by unscrewing pneumatic damper cylinder clevis. This procedure opens damper more widely and increases CFM (see Figure 5-7).
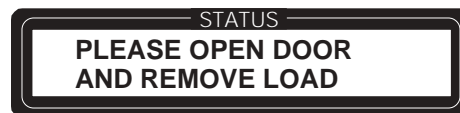
⚠ **WARNING – BURN HAZARD: Allow unit to cool down before performing any service on mechanical components and on piping. Components and piping become very hot during unit operation.**

6. Allow cycle to run to completion. Refer to *Operator Manual (P-122998-050)* to verify proper operation of unit and cycle.

7. When Cycle is competed display shows:

```
┌──────── STATUS ────────┐
│   PLEASE OPEN DOOR      │
│   AND REMOVE LOAD       │
└────────────────────────┘
```

...and alarm buzzer sounds, indicator light on load side (or on unload side, if double door unit) turns green.
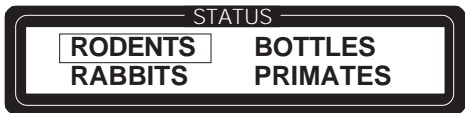
DOOR OPEN

8. Open chamber doors by pressing **DOOR OPEN** (on unload side if double door unit).

9. Inside wash chamber, remove debris and clean suction plate.

5.6.4 Manifold Coupling System (Option)

*NOTE: If Manifold Coupling System (option) is not present, move to Step 8.*

1. If **Manifolded Coupling System** (option) is present, insert **Bottle Washing Cart** and/or **Central Header Manifold** (if available) into wash chamber. Refer to *Operator Manual (P-122998-050)* for proper installation of Bottle Washing Cart and/or Central Spray Header.

2. Properly align cart into rails. Make sure cart coupling system and manifold are properly aligned. Make sure Spray Arms rotate freely.

DOOR CLOSE   **SELECT CYCLE**

3. Close chamber doors by pressing **DOOR CLOSE** and press **SELECT CYCLE** touch pad until **BOTTLES** is flashing. Display shows:

```
┌─────────── STATUS ───────────┐
│  ┌─────────┐                  │
│  │ RODENTS │     BOTTLES      │
│  └─────────┘                  │
│    RABBITS      PRIMATES      │
└──────────────────────────────┘
```
☐ *indicates flashing position.*

CYCLE START

4. Press **CYCLE/START** touch pad to start the selected cycle.

5. Verify Manifolded Coupling System piping for leaks. Tighten clamps if necessary.

6. When cycle is completed, display shows:
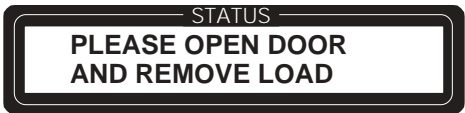
```
┌─────────── STATUS ───────────┐
│      PLEASE OPEN DOOR         │
│      AND REMOVE LOAD          │
└──────────────────────────────┘
```

...and alarm buzzer sounds, indicator light on load side (or on unload side if double door unit) turns green.

DOOR OPEN

7. Open chamber doors by pressing **DOOR OPEN**. Allow wash chamber and accessory to cool down before unloading. Verify display screen returns to the main cycle menu once doors are opened. Display shows:
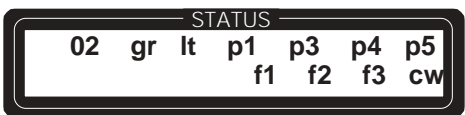
```
┌─────────── STATUS ───────────┐
│   RODENTS       BOTTLES       │
│   RABBITS       PRIMATES      │
└──────────────────────────────┘
```
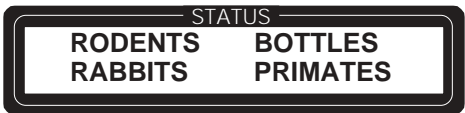
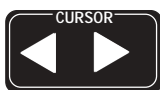### 5.6.5 Clean Steam Supply Valve

DOOR CLOSE

8. Press **DOOR CLOSE** to close doors.

9. Shut off steam supply valve.

10. Open pressure gauge on manual ball valve located on main utility inlet steam line.

11. Push Emergency Stop Pushbutton and pull it back.

SELECT CYCLE

12. Enter Service Mode (see Section 5.3) and follow procedure on how to access digital outputs menu (see Table 5-1). Press **SELECT CYCLE** until display shows:

```
┌─────────── STATUS ───────────┐
│  02   gr  lt  p1  p3  p4  p5  │
│           f1  f2  f3  cw  wh  dh  l1
└──────────────────────────────┘
```

⚠ **WARNING – BURN HAZ-ARD: Allow piping to cool down before inspecting and/or cleaning supply line strainers.**

⚠ **WARNING – BURN HAZARD: When inspecting and/or cleaning supply line strain-ers, hot water/steam may be sprayed through door open-ing. Wear appropriate Per-sonal Protective Equipment (PPE).**

13. Press **CURSOR (left or right)** to select **wh** (In-Line Heat Exchanger Valve). Press **VALUE (up or down)** to activate **WH**.

14. Verify pressure gauge on main inlet steam line. Make sure pressure on inlet steam line has dropped to lowest point possible.

15. Lock out and tag out main electrical disconnect switch in **OFF** position.

16. Very slowly untighten plug on utility supply-line strainer.

17. Remove filter from strainer and remove all debris and clean filter. Reinstall filter, plug.

18. Close pressure gauge valve.

19. Turn on main utility steam line valve. Open main electrical disconnect switch in **ON** position.

IMPORTANT: After a few weeks of operation, inspect units for leaks. Re-tighten all clamps and connections.

WASHER IS NOW READY FOR NORMAL OPERATION. Contact your local STERIS representative for a demonstration on how to operate the equipment. Refer to the *Operator Manual (P-122998-050)* for washer operating instructions.

Pneumatic Cylinder

Clevis
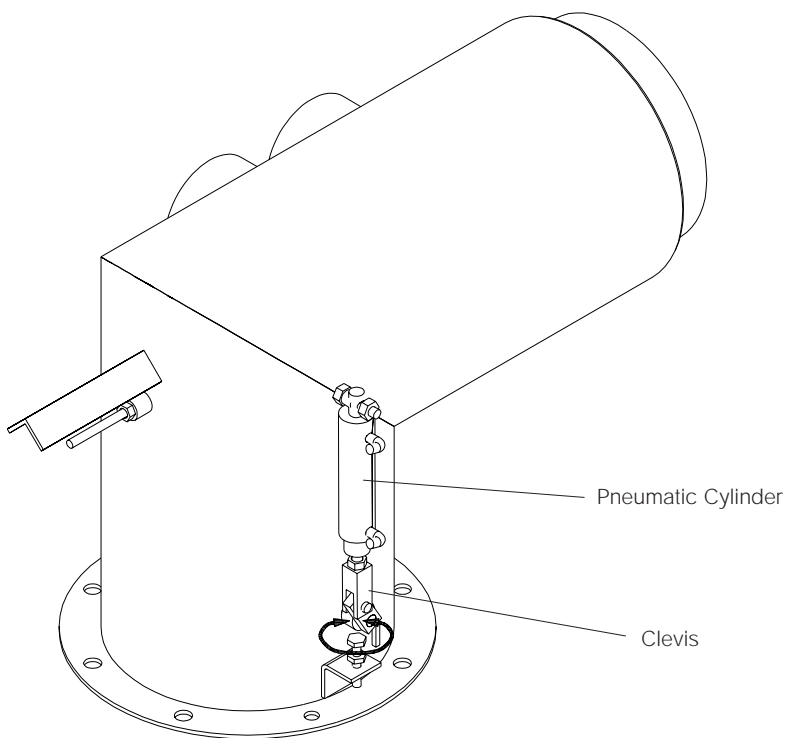
RÉF.: 920-003-953

Figure 5-7. Damper Adjustment

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